SE

INDEX I.

In which the Plants contained in the ſecond Faſciculus, are arranged according to the Syſtem of LINNÆUS.

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3	Veronica Becabunga	
4	Poa rigida	TRIANDRIA *Monogynia.*
5	Poa pratenſis	
6	Poa trivialis	
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9	Galium Aparine	TETRANDRIA *Monogynia.*
10	Plantago lanceolata	
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12	Sagina erecta	TETRANDRIA *Tetragynia.*
13	Convolvulus arvenſis	PENTANDRIA *Monogynia.*
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23	Epilobium tetragonum	
24	Epilobium anguſtifolium	
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29	Saponaria officinalis	
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35	Ceraſtium viſcoſum	
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39	Ranunculus Ficaria	
40	Ranunculus hirſutus	
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43	Ajuga reptans	DIDYNAMIA *Gymnoſpermia.*
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50	Geranium molle	MONADELPHIA *Decandria.*
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54	Trifolium ſubterraneum	
55	Trifolium fragiferum	
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58	Sonchus oleraceus	SYNGENESIA *Polygamia Æqualis.*
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INDEX II.

In which the Latin Names of the Plants are arranged Alphabetically.

INDEX III.

In which the Engliſh Nomes of the Plants are arranged Alphabetically.

Veronica hederifolia

Sansom Sculp

VERONICA ARVENSIS. WALL SPEEDWELL.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. limbo 4-partito, laciniâ infimâ anguſtiore. *Capſula* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *arvenſis* floribus ſolitariis, foliis cordatis inciſis pedunculo longioribus. *Lin. Syſt. Vegetab. p.* 57. *Sp. Pl. p.* 18.

VERONICA caule erecto, foliis ovatis, ſubhirſutis, dentatis; petiolis breviſſimis. *Haller. hiſt. helv. n.* 548.

VERONICA *arvenſis. Scopoli. Flor. Carniol. p.* 18.

ALSINE veronicæ foliis, floſculis cauliculis adhærentibus. *Bauhin. Pin.* 250.

ALSINE foliis Veronicæ. *Gerard. emac.* 613.

ALSINE foliis ſubrotundis Veronicæ. *Parkinſon.* 762.

VERONICA floſculis ſingularibus cauliculis adhærentibus. *Raii Syn. p.* 279, Speedwell Chickweed.

Oeder Fl. Dan. t. 515.

Hudſon Fl. Angl. 6. *ed.* 2. 6.

Lightfoot. Fl. Scot. p. 75.

RADIX annua, fibroſa.

ROOT annual and fibrous.

CAULIS palmaris, aut dodrantalis, erectus, plerumque ramoſus, ſubinde ſimplex, (rami alternatim oppoſiti, adſcendentes,) teres, purpuraſcens, undique hirſutus.

STALK upright, from three to nine inches in height, generally branched, now and then ſimple, (the branches alternately oppoſite and aſcending,) round, purpliſh, and hirſute on every ſide.

FOLIA inferiora petiolata, hirſuta, ſubcordata, inferne ſæpe purpurea, obtuſa, planiuſcula, inciſa, quinquenervia, ſuperiora ſeſſilia, ſubtortuoſa.

LEAVES on the bottom of the ſtalk ſtanding on foot-ſtalks, hirſute, ſomewhat heart-ſhaped, often purple on the under ſide, obtuſe, flattiſh, notched on the edges, having five ribs, the upper ones ſeſſile, and ſomewhat twiſted.

FLORES pedunculis breviſſimis inſidentes, ſpicati, bractæâ lanceolatâ ſuffulti.

FLOWERS ſitting on very ſhort foot-ſtalks, growing in a ſpike, ſupported by a lanceolate floral-leaf

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-lanceolatis, hirſutulis, hirſutie glanduloſâ, duobus inferioribus duplo fere majoribus et longioribus, *fig.* 1.

CALYX: a PERIANTHIUM deeply divided into four ſegments, which are oval, lanceolate, and hairy; (the hairs terminated with glands;) the two lowermoſt almoſt twice as large and long as the others, *fig.* 1.

COROLLA monopetala, ſubrotata, cœrulea, leviſſimo tactu decidua, tubus breviſſimus, albus, limbus quadripartitus, laciniis ovatis, infimâ anguſtiore, *fig.* 2.

COROLLA monopetalous, and ſomewhat wheel-ſhaped, of a blue colour, falling off on the leaſt touch; the tube very ſhort and white; the limb deeply divided into four ſegments, which are oval, the lower one narroweſt, *fig.* 2.

STAMINA: FILAMENTA duo, alba, medio craſſiora, corollâ dimidio breviora: ANTHERÆ ſubcordatæ, flaveſcentes, *fig.* 3.

STAMINA: two white FILAMENTS thickeſt in the middle, half the length of the corolla: ANTHERÆ ſomewhat heart-ſhaped, and yellowiſh, *fig.* 3.

PISTILLUM: GERMEN obcordatum, compreſſum, viſcoſum, baſi glandulâ cincto: STYLUS breviſſimus, albus, rectus: STIGMA craſſum ſubtruncatum, *fig.* 4.

PISTILLUM: GERMEN inverſely heart-ſhaped, flattened, and viſcous, ſurrounded at bottom by a gland: STYLE very ſhort, white, and ſtrait; STIGMA thick, with an appearance of being cut off, *fig.* 4.

PERICARPIUM: CAPSULA obcordata, compreſſa, pallide fuſca, *fig.* 5, continens.

SEED-VESSEL a heart-ſhaped flattened CAPSULE, of a pale brown colour, *fig.* 8, containing of

SEMINA circiter 14 ovata, compreſſa, medio depreſſa, *fig.* 6, 7.

SEEDS about fourteen, which are oval and flat, with a depreſſion in the middle, *fig.* 6, 7.

AS the *Veronica agreſtis* grows chiefly in gardens and cultivated ground, ſo this ſpecies, which is nearly allied to it, is moſt commonly found on walls, alſo in fallow fields, and on the borders of dry paſtures.

It flowers in April, and the ſeeds ripen in May.

The old botaniſts, inattentive to the parts of fructification, diſtinguiſhed this and ſome other ſpecies of Veronica, by the general name of *Alſine*.

Students are apt, as we have before obſerved, to confound it with the *agreſtis*, from which it differs in many reſpects: the ſtalk in particular is upright; the flowers are nearly ſeſſile; the ſeed-veſſels are much ſmaller, and when ripe form a ſpike.

It varies in ſize from one to ſix or eight inches: and on walls, the bottom leaves are frequently obſerved to be purple.

Veronica arvensis

VERONICA *BECABUNGA.* BROOKLIME.

VERONICA *Linnæi Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. limbo 5-partito, lacinia infima anguſtiore.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

VERONICA *Becabunga* racemis lateralibus, foliis ovatis planis, caule repente. *Linn. Syſt. Vegetab. p.* 57.

VERONICA foliis ovatis, ſerratis, glabris, ex alis racemoſa. *Haller hiſt. n.* 534.

VERONICA *Becabunga. Scopoli Fl. Carniol. n.* 11.

ANAGALLIS aquatica minor folio ſubrotundo. *Bauhin pin.* 252.

ANAGALLIS aquatica vulgaris, ſive Becabunga. *Parkinſon* 1236.

ANAGALLIS ſive Becabunga. *Gerard emac.* 620.

VERONICA aquatica rotundifolia, Becabunga dicta minor. *Raii Syn.* 280, Common Brooklime. *Hudſon Fl. Angl. p.* 4. *Oeder Fl. Dan. Icon.* 511.

RADIX perennis, fibroſa, fibris plurimis, capillaribus, albis.

CAULES numeroſi, repentes, teretes, læves, craſſi, ſucculenti, rubentes, ramoſi.

FOLIA ovato-obtuſa, utrinque glabra, ſubcarnoſa, oppoſita, dentata, denticulis glandulâ terminatis.

FLORES pulchre cœrulei, ocello albo, racematim diſpoſiti, racemis ex utraque alâ prodeuntibus.

CALYX: PERIANTHIUM quadripartitum, laciniis ovato-acutis, lævibus, corolla brevioribus, *fig.* 2.

COROLLA monopetala, ſubrotata, cœrulea, venis ſaturatioribus ad baſin ſtriatis, laciniis ſubovatis, infima anguſtiore, *fig.* 3.

STAMINA: FILAMENTA duo, alba, medio craſſiora: ANTHERÆ cœruleſcentes: POLLEN album, *fig.* 4.

PISTILLUM: GERMEN ſubrotundum, didymum: STYLUS apice incraſſatus, purpureus: STIGMA capitatum, *fig.* 5.

PERICARPIUM: CAPSULA ſubrotunda, compreſſa, bilocularis, quadrivalvis, *fig.* 6.

SEMINA plurima, ovata, fuſca, *fig.* 7, 8.

ROOT perennial, fibrous, the fibres numerous, very ſmall and white.

STALKS numerous, creeping, round, ſmooth, thick, ſucculent, of a reddiſh colour, and branched.

LEAVES oval and obtuſe, ſmooth on both ſides, ſomewhat fleſhy, oppoſite, indented at the edges, each little tooth terminated by a gland.

FLOWERS of a beautiful blue colour, with a white eye, growing in racemi or branches which proceed from the boſoms of the leaves on each ſide of the ſtalk.

CALYX: a PERIANTHIUM divided into four ſegments, which are of an oval pointed ſhape, ſmooth, and ſhorter than the corolla, *fig.* 2.

COROLLA monopetalous, ſomewhat wheel-ſhaped, of a blue colour, ſtriped at bottom with deeper veins of the ſame colour; the ſegments nearly oval; the lowermoſt narrower than the others, *fig.* 3.

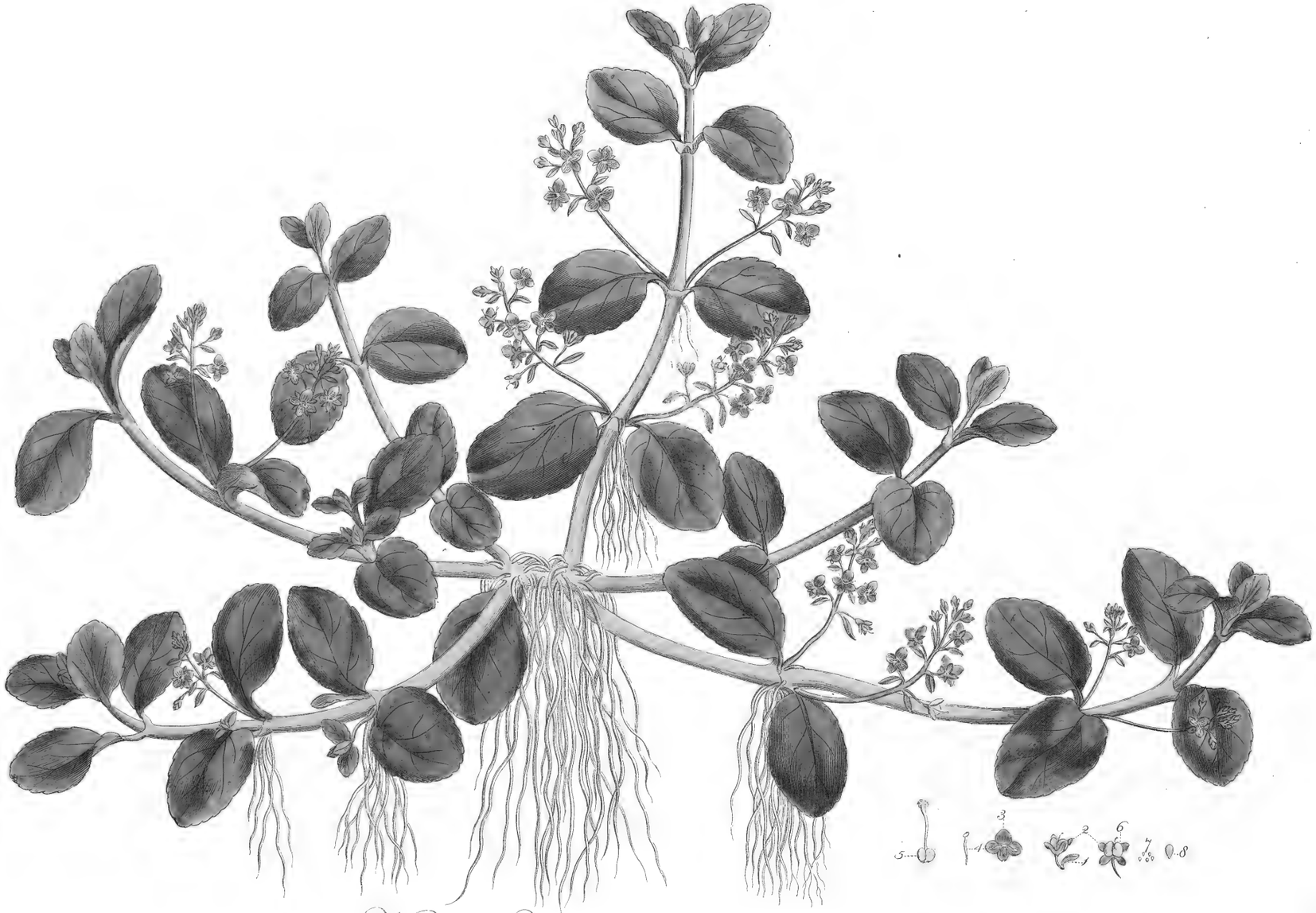
STAMINA: two white FILAMENTS, thickeſt in the middle: ANTHERÆ blueiſh: the POLLEN white, *fig.* 4.

PISTILLUM: GERMEN roundiſh, double: STYLE thickeſt at top and purple: STIGMA forming a little head, *fig.* 5.

SEED-VESEL: a roundiſh, flattened CAPSULE of two cavities and four valves, *fig.* 6.

SEEDS ſeveral, oval and brown, *fig.* 7, 8.

BROOKLIME grows very commonly in brooks and muddy waters, whence its name, and flowers in June and July. It is an officinal plant, and made uſe of in the ſcorbutic juices of the London Diſpenſatory, which ſeems to be the only purpoſe to which it is applied.



Veronica Becabunga

POA RIGIDA. HARD MEADOW-GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *rigida* panicula lanceolata ſubramoſa ſecunda: ramulis alternis ſecundis. *Linn. Syſt. Vegetab. p.* 98.

GRAMEN panicula multiplici. *Bauhin. Pin. p.* 3.

GRAMEN exile duriuſculum in muris et aridis proveniens. *Raii Syn.* 410, Small Hard Graſs.

GRAMEN loliaceum murorum duriuſculum ſpica erecta rigida. *Hiſt. Oxon. III.* 182. *t.* 2. *fig.* 9.

GRAMEN minus duriuſculum. *Gerard.*

GRAMEN arvenſe, filicinâ, duriore panicula, gracilius. *Barrel. Ic.* 49.

Scheuchz. Agroſt. ed Haller. p. 271. *t.* 6. *fig.* 2. 3. ſpiculæ tantum.

Hudſon Fl. Angl. p. 35. *ed.* 2. *p.* 42.

RADIX annua, paucis fibrillis inſtructa.

CULMI plures, palmares, erecti, ad baſin infracti, plerumque ſimplices, læves, binodes.

FOLIA lanceolata, lævia, longitudine vaginæ, ſuberecta; *Membrana* brevis, obtuſa, apice lacera; *Vagina* lævis, lineata.

PANICULA lanceolata, ſeſquiuncialis, paululum recurvata, rigida, ſubſecunda.

SPICULÆ lineari-lanceolatæ, ſuboctofloræ, acutæ, ſubcompreſſæ, *fig.* 1.

CALYX: GLUMA bivalvis, valvulæ longitudine et magnitudine inæquales, ad lentem ſcabriuſculæ, *fig.* 2.

COROLLA: GLUMA bivalvis, valvulæ ſubæquales, ovato-acutæ, marginibus membranaceis, *fig.* 3.

STAMINA: FILAMENTA tria, capillaria. longitudine Corollæ: ANTHERÆ flavæ, minimæ, breves, utrinque furcatæ, *fig.* 4, 5.

NECTARIA: GLUMULÆ duæ, ovato-acutæ, longitudine Germinis, ope microſcopii viſibiles, *fig.* 6.

PISTILLUM: GERMEN turbinatum: STYLI duo ad baſin uſque ramoſi, *fig.* 7, 8.

SEMINA ovato-acuta, hinc convexa, inde concava.

ROOT annual, and furniſhed with few fibres.

STALKS ſeveral, about four inches high, upright, crooked at bottom, generally ſimple, ſmooth, with two knots or joints.

LEAVES lanceolate, ſmooth, the length of the ſheath, and nearly upright; *Membrane* at the baſe of the leaf ſhort, obtuſe, and jagged at top; *Sheath* ſmooth, and very finely grooved.

PANICLE lanceolate, about an inch and a half long, bent a little back, rigid, the ſpiculæ in ſome degree growing one way.

SPICULÆ of a ſhape betwixt linear and lanceolate, containing for the moſt part eight flowers, pointed and flattiſh *fig.* 1.

CALYX: a GLUME of two valves, the valves unequal in length and ſize, appearing roughiſh when viewed with a magnifier, *fig.* 2.

COROLLA: a GLUME of two valves, the valves nearly equal, of an oval pointed ſhape, the edges membranous, *fig.* 3.

STAMINA: three FILAMENTS, fine, the length of the Corollæ; ANTHERÆ yellow, very minute, ſhort, and forked at each end, *fig.* 4, 5.

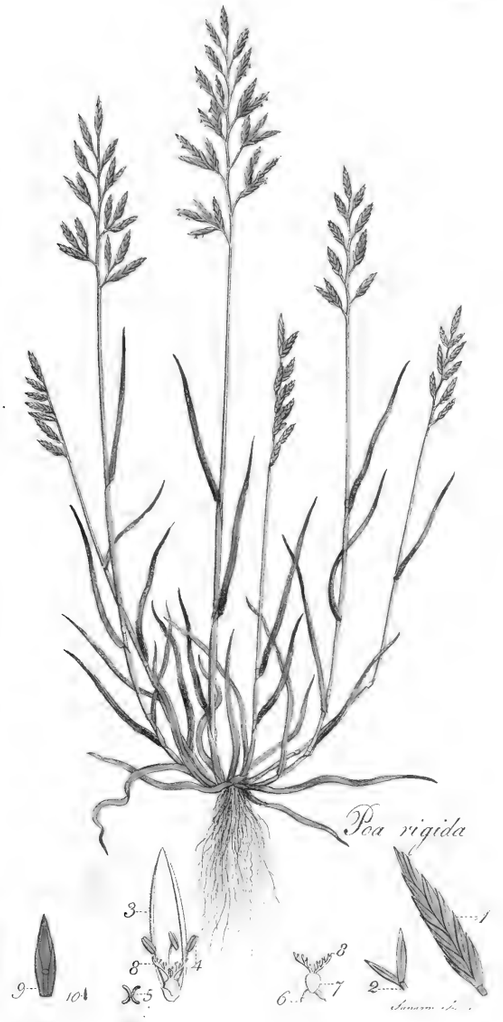
NECTARIES: two ſmall GLUMES of an oval pointed ſhape, the length of the Germen, viſible by the help of a microſcope, *fig.* 6.

PISTILLUM: GERMEN larger at top than at bottom: STYLES two, branched down to the bottom, *fig.* 7, 8.

SEEDS of an oval pointed ſhape, convex on one ſide, and hollow on the other.

Neither HALLER nor SCOPOLI make any mention of this graſs. According to SCHEUCHZER, it is common in *Italy* and *France*, in dry fields, and ſometimes on walls: with us it is found more frequently on the latter; and though not ſo common as ſome of the graſſes, yet it is to be found on moſt of the walls about London, in May and June.

In very dry and barren ſituations, the ſtalks ſometimes are found ſimple, the panicle alſo not branched, and the ſpiculæ, inſtead of containing about eight flowers, which is the uſual number, have no more than three or four: in this ſtate SCHEUCHZER makes another ſpecies of it: this alteration, from an exceſs or ſcantineſs of nouriſhment, is what all plants are ſubject to; and no circumſtance ſeems to have been leſs regarded by Botaniſts—To form ſpecies or varieties from ſuch a cauſe, is to multiply plants without end. A compleat knowledge of a plant, is only to be attained by obſerving it at the different periods of its growth, in all the various ſituations in which it occurs—Information obtained from any other ſource is not to be depended on.


Poa rigida
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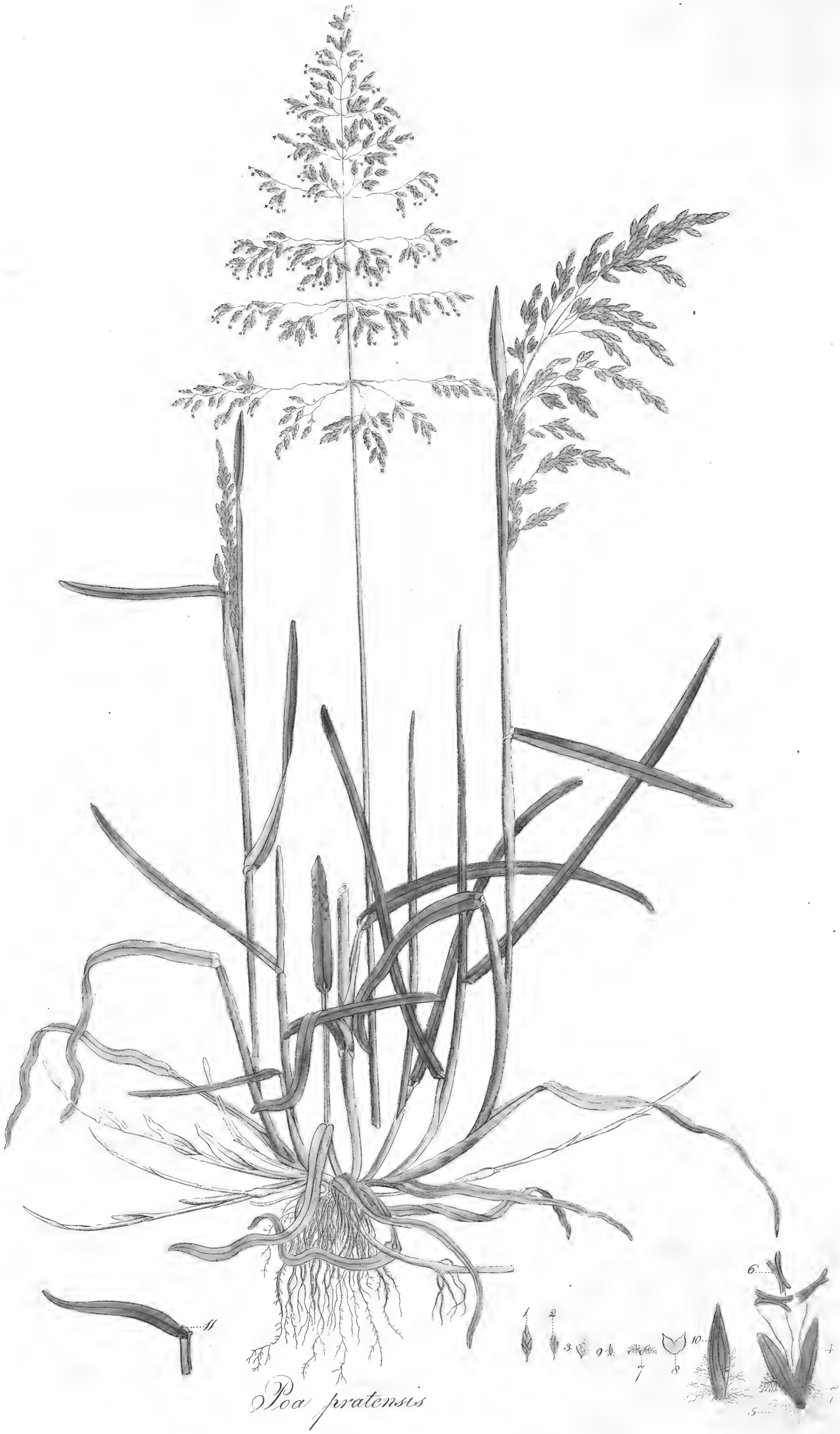


Poa pratensis

POA PRATENSIS. SMOOTH STALK'D MEADOW GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, multiflorus. *Spiculæ* ovatæ; valvulis margine ſcarioſis, acutiuſculis.

Rai Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *pratenſis* panicula diffuſa, ſpiculis ſubquinquefloris, culmo erecto lævi, membrana foliorum obtuſo.

POA *pratenſis* panicula diffuſa, ſpiculis quinquefloris glabris, culmo erecto tereti. *Linnæi Syſt. Vegetab. p.* 97. *Fl. Suecic.* 82.

POA *pratenſis*. *Scopoli Fl. Carniol. p.* 70. *n.* 100. *Diagn.* Panicula diffuſa ſpiculæ 2-3 floræ. Glumis inæqualibus, lanugine nulla.

POA panicula diffuſa locuſtis trifloris glabris. *Haller hiſt. n.* 1465. ſecundum *Scopoli*.

GRAMEN pratenſe paniculatum medium. *Raii Syn.* 409, The greater or middle ſort of Meadow Graſs. *Bauhin Pin.* 2. pratenſe minus. *Gerard* 2. *Parkinſon* 1156.

RADIX perennis, *repens*, intra terram fiſſuraſque murorum facile penetrans.

CULMI plerumque pedales, erecti, *læves*, vix manifeſte ſtriati.

FOLIA lævia, ſaturate viridia, ſubinde glauca, membranâ *brevi obtuſa* inſtructa, *fig.* 11.

PANICULA erecta, diffuſa.

SPICULÆ ovato-acutæ, plerumque quinquefloræ, etiam bifloræ, utrinque compreſſæ, *fig.* 1, 2.

CALYX: GLUMA bivalvis, valvulis inæqualibus, acuminatis, concavis, *fig.* 3.

COROLLA: GLUMA bivalvis, valvulæ ſubæquales, altera concava, carinâ ad lentem viſa ſcabriuſcula, altera planiuſcula, *fig.* 4; in fundo calycis *lanugo* obſervanda, *evulſis floſculis*, *fig.* 3, 5.

STAMINA: FILAMENTA tria, capillaria, glumis longiora: ANTHERÆ utrinque bifurcæ, *fig.* 6.

PISTILLUM: GERMEN ovatum: STYLI duo, ad baſin uſque ramoſi, *fig.* 7.

NECTARIUM: GLUMULÆ duæ ad baſin germinis, *fig.* 8, auct.

SEMEN anguloſum, acuminatum, baſi lanugine inſtructo, *fig.* 9. nat. mag. *fig.* 10, auct.

ROOT perennial and *creeping*, eaſily penetrating into the earth and crevices of walls.

STALKS generally about a foot high, upright, *ſmooth*, ſcarce perceptibly ſtriated.

LEAVES ſmooth, of a deep green colour, ſometimes blueiſh, furniſhed with a *ſhort blunt* membrane, *fig.* 11.

PANICLE upright and ſpreading.

SPICULÆ oval-pointed, generally with five flowers, ſometimes only two, flattened on each ſide, *fig.* 2.

CALYX a GLUME of two valves, unequal, acuminated and hollow, *fig.* 3.

COROLLA a GLUME of two valves, the valves nearly equal; the one concave, with the keel appearing ſomewhat rough if magnified; the other flattiſh, *fig.* 4: in the bottom of the calyx a filamentoſe or wooly ſubſtance is apparent when the flowers are drawn out of it, *fig.* 3, 5.

STAMINA: three FILAMENTS, thread-like, longer than the glumes: ANTHERÆ forked at each end, *fig.* 6.

PISTILLUM: GERMEN oval: STYLES two, branched down to the bottom, *fig.* 7.

NECTARY: two little GLUMES at the baſe of the germen, *fig.* 8, magnified.

SEED angular and pointed, at bottom wooly, of its natural ſize, *fig.* 9; magnified, *fig.* 10.

THE *Poa pratenſis* and *Poa trivialis* approach very near each other in their general appearance, ſo much ſo, indeed, that the botaniſt who is intimately acquainted with them, cannot, if he ſees them grow together, diſcriminate them at a little diſtance; and the characters from which modern botaniſts have drawn their ſpecific differences, have been ſo vague and indeterminate, that the ſtudent is never able to ſatisfy himſelf whether he has found the one or the other; yet there are not two graſſes which afford more obvious or ſatisfactory marks of diſtinction. The difficulty which I have experienced myſelf in the inveſtigation of theſe two plants, has made me exceedingly attentive to them; and what I relate is the reſult of repeated obſervations, joined to a careful culture of them.

Theſe

Theſe graſſes differ chiefly in the following particulars: the *pratenſis* is in every part perfectly ſmooth; while in the *trivialis* the ſtalk, leaves, ſheaths of the leaves, and branches of the panicle, all feel rough if the plant be drawn downward betwixt the thumb and finger: excluſive of this difference, which is a very good one for a common obſerver, in the *trivialis* the ſheath of the leaf is flatter and more deeply fluted: nor do the roots of theſe two plants differ leſs; the *trivialis* being ſimply fibrous; the *pratenſis* creeping, and ſending out many white ſhoots: but what diſtinguiſhes them moſt fully and moſt infallibly, is the difference in the membrane at the bottom of the leaf, where the ſheath begins; this in the *pratenſis* is very ſhort and blunt; in the *trivialis* it is long and pointed: and the beauty of this diſtinction is, that it is obvious to the moſt common obſerver; nor did I ever know it fail me, let the graſs vary ever ſo much in ſize and other particulars. They differ alſo with reſpect to the ſize of the ſpiculæ and the number of flowers contained in each: in the *trivialis* they are either biflorous or triflorous; in the *pratenſis* they are moſt commonly *quinqueflorous*. Such are the moſt obvious diſtinctions in the graſſes themſelves: other circumſtances contribute to render them ſtill more ſo. The *pratenſis* grows generally on walls; indeed there is not a wall in any of the villages around town on which it may not be found in abundance: it very frequently occurs on dry banks, and oftentimes in meadows. The *trivialis* is ſcarce ever found on walls, ſeldom on dry banks; but moſt frequently in moiſt meadows, or the ſides of ditches; ſo that the one graſs ſeems to delight in a dry, the other in a moiſt ſituation. They differ ſomewhat alſo in the time of their flowering; the *pratenſis* flowering about the third week in May, the *trivialis* the firſt week in June: and there is this remarkable with reſpect to the flowering of the *pratenſis*, that after it has flowered in the Spring, it ſhews no diſpoſition to flower during the Summer; while the *trivialis* is found in bloom, though not generally, during the whole of the Summer. Added to this, there is a firmneſs in the ſtalk of the *pratenſis* not perceivable in the *trivialis*. By an attention to theſe remarks, I truſt the young botaniſt will acquire a clear idea of them, without having recourſe to the pubeſcence, &c. which, though laid ſo much ſtreſs on by LINNÆUS and SCOPOLI, is by no means adequate to the diſtinguiſhing of them. Indeed it is difficult to know rightly what they mean by *ſpiculis baſi pubeſcentibus*, as no pubeſcence is perceivable in them outwardly: but if one attempts to draw the floſcules out of the glumes of the calyx, we perceive a filamentoſe appearance, which ſeems to connect the florets and calyx together: but this appearance, which is indeed a very ſtriking and ſingular one, and which I have not yet obſerved in any other graſſes, takes place nearly in an equal degree in both: this ſubſtance adheres to the ſeed when ſeparated, and cauſes them to hang to one another as if there were cobwebs among them; ſo that a perſon ignorant of the cauſe, from an examination of ſuch ſeed, might conclude it old and good for nothing: this appearance is moſt ſtriking in the *trivialis*. RAY, whoſe deſcriptions always accord with nature, and are taken from the moſt obvious characters of the plant, mentions the roughneſs, *(Culmi nonnihil aſperi:)* but the particular ſhape of the membrane has not, that I know of, been noticed till now.

The *Poa pratenſis* may be conſidered as a valuable graſs, and one of thoſe which ought to enter into the compoſition of a good meadow or paſture: I ſay compoſition, becauſe I imagine every good meadow ſhould be compounded of a variety of graſſes, each having peculiar and valuable properties. We are not to expect all that can be wiſhed in a meadow in one graſs; ſome are calculated to produce food, and carry a beautiful verdure even in the depth of winter: ſome bring forth early ſhoots, and make choice food for cattle in the ſpring: ſome produce a large quantity of ſweet tender leaves at bottom; others by the weight and height of their ſtalks, and of their heads or panicles at top, encreaſe the weight of the hay: ſome ſhoot ſtrongly and produce a large aftermath: ſome give a more agreeable ſmell to the hay. So that to have a good meadow, we ſhould have a variety of graſſes; and if we may argue from analogy, a variety of food may alſo be more grateful to cattle.

The principal advantages of the *Poa pratenſis* are, that it is a ſweet graſs, and eaten readily by cattle in general: it carries its verdure in the winter better than moſt others, and throws out young and numerous ſhoots in the ſpring, ſo as to make good ſpring food. It produces a good crop of leaves at bottom, which make exceeding fine hay, and is fit for cutting early in the ſpring.

There is a glaucous or blueiſh variety of this graſs occurs frequently in meadows: it varies alſo in the number of its floſcules, from three to five, or ſometimes more: as likewiſe in its ſize: when growing on walls or dry banks, it does not reach half the height which it does in fertile meadows.

Poa trivialis

POA TRIVIALIS. ROUGH-STALK'D MEADOW GRASS.

POA *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, multiflorus. *Spicula* ovata : valvulis margine ſcarioſis acutiuſculis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

POA *trivialis* panicula diffuſa, ſpiculis ſubtrifloris, culmo erecto ſcabro, membranâ foliorum acuminata.

POA *trivialis* panicula diffuſa, ſpiculis trifloris baſi pubeſcentibus, culmo erecto tereti. *Linnæi Syſt. Vegetab. p.* 97.

GRAMEN pratenſe paniculatum medium. *Bauhin pin.* 5. *Raii Syn. p.* 409. *n.* 2.

POA *trivialis*. *Scopoli Fl. Carniol. p.* 69. *n.* 39. *Diagn.* Lanugo ad baſin petali exterioris.

POA panicula diffuſa locuſtis trifloris villoſis. *Haller hiſt. n.* 1562. ſecundum Scopoli.

GRAMEN pratenſe minus. *Parkinſon* 1156. *Gerard emac.* 2. *Hudſon Fl. Angl. p.* 33.

RADIX fibroſa, capillacea.

CULMUS erectus, pedalis ad bipedalem, baſi repens, unde perenne evadit hoc gramen, ſtriatus, ſcabriuſculus, ſæpe purpureus.

FOLIA: VAGINA ſubcompreſſa, ſtriata, ſcabriuſcula: MEMBRANA ad baſin foliorum *longa*, *acuminata*, *fig.* 1; folia ipſa longa, ſcabriuſcula, ſubtus nitida, tenera.

PANICULA erecta, diffuſa.

SPICULÆ parvæ, bifloræ, aut trifloræ, (*fig.* 2. 2. magn. nat. *fig.* 3. 3. lente auct,) nonnunquam etiam quadrifloræ, ovato-acuminatæ, ſubcompreſſæ.

GLUMÆ calycinæ bivalves, valvulis inæqualibus, acuminatis, carinatis, carinâ ſcabrâ, *fig.* 4. Si glumæ corollaceæ ex calycinis glumis extrahantur, lanugo (*fig.* 9,) conſpiciatur, huic et *Poæ pratenſi* quouſque obſervavi propria.

GLUMÆ corollaceæ bivalves, valvulis ſubæqualibus, acutis.

STAMINA: FILAMENTA tria capillaria, glumis paulo longiora, *fig.* 6: ANTHERÆ flavæ aut purpuraſcentes, demum utrinque furcatæ, *fig.* 6.

PISTILLUM: GERMEN minimum, ovatum: STYLI duo ad baſin fere plumoſi, *fig.* 7.

NECTARIUM: GLUMULÆ duæ teneræ ad baſin germinis, *fig.* 8.

SEMEN oblongo acuminatum, angulоſum, baſi lanugine inſtructum, *fig.* 10.

ROOT fibrous and capillary.

STALK upright, from one to two feet high, creeping at bottom, whence this graſs becomes perennial, ſtriated, rough, and often purple.

LEAVES: the SHEATH flattiſh, ſtriated, roughiſh; the MEMBRANE at the baſe of the leaf *long*, and *pointed*, *fig.* 1 : the leaves themſelves long, ſomewhat rough, ſhining underneath, and tender.

PANICLE upright and ſpreading.

SPICULÆ ſmall, containing two or three flowers, (*fig.* 2. 2. of their natural ſize, *fig.* 3. 3. magnified) and ſometimes even four flowers, of an oval pointed ſhape, and flattiſh.

GLUMES of the Calyx compoſed of two valves, which are unequal, pointed, and have the keel, or rib on the back, rough, *fig.* 4. If the glumes of the corolla are drawn out of the glumes of the calyx, a wooly ſubſtance (*fig.* 9,) is obſervable, and which, as far as I have hitherto noticed, is peculiar to this Graſs and the *Poa pratenſis*.

GLUMES of the corolla of two valves, the valves nearly equal and pointed, *fig.* 3.

STAMINA: three capillary FILAMENTS a little longer than the glumes, *fig.* 6: ANTHERÆ yellow or purpliſh, finally becoming forked at each end, *fig.* 6.

PISTILLUM: GERMEN very ſmall and oval: STYLES two, feathered almoſt to the bottom, *fig.* 7.

NECTARY: two little tender GLUMES at the bottom of the germen, *fig.* 8.

SEED oblong and pointed, angular, and furniſhed with a woolly ſubſtance at bottom, *fig.* 10.

THE means of diſtinguiſhing this Graſs from the *Poa pratenſis*, (for which it is the moſt liable to be miſtaken) with many other particulars relative to it, we have already given under the latter: conſidered in an agricultural light, it is certainly one of our beſt graſſes, both for hay and paſturage; indeed a good meadow can ſcarcely be formed without it. Its chief qualities are, that it produces a large quantity of ſweet tender leaves, which are preferred by cattle to moſt others, and which are convertible into exceeding fine hay. It is an early graſs, flowering about the beginning of June. It does not bear the froſts of the Winter ſo well, nor does it ſhoot ſo early in the Spring as the *Poa pratenſis*; but when the weather comes to be ſo warm as to make the graſſes in general ſhoot, this grows faſter, and produces a greater crop of bottom leaves, (the moſt deſirable parts of graſſes,) than moſt others.

It grows beſt in meadows that are tolerably moiſt: in dry paſtures it is often found, but much ſmaller

Hints relative to the Culture of the Graſſes.

When the advantages reſulting to the community from the introduction of *Wheat*, *Barley*, *Rye*, *Clover*, *Tares*, *St. Foin*, *Trefoil*, *&c.* many of which are natives of our own country, daily occur to us: when neither pains nor expence are ſpared to improve our arable lands, it ſeems ſtrange that ſo little care ſhould be taken of the improvement of our meadows and paſtures, which might doubtleſs be made to produce double or treble the crops they already do, by the judicious introduction of proper graſſes.

If

If we examine our meadows, paſtures, and downs, we ſhall find them pretty much in a ſtate of nature, excepting thoſe paſtures which of later years have been ſown with *Rye Graſs* and *Clover*, full of an indiſcriminate mixture of plants, ſome of which afford good, others bad food; ſome good crops, others ſcarce any crops at all. That I may not be thought to ſpeak at random on this matter, I ſhall here mention a few facts to corroborate what I have aſſerted.

My very worthy and much eſteemed friend THOMAS WHITE, Eſq; with a view to the aſcertaining the produce of ſeveral downs and hilly paſtures fed on by ſheep, procured from each of the undermentioned different downs and commons, in Hampſhire and Suſſex, a turf which, though not larger than about ſix inches in diameter, and choſen as pure as any part of the paſturage, produced, on being planted in a garden, the following plants.

Turf from *Selborn* Common.

1	*Plantago lanceolata.*	Narrow-leaved Plantain.
2	*Agroſtis capillaris.*	Fine panicled Agroſtis.
3	*Avena flaveſcens.*	Yellow Oat Graſs.
4	*Dactylis glomeratus.*	Rough Cocksfoot Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Poa annua.*	Common dwarf Poa.
7	*Cynoſurus criſtatus.*	Creſted Dogs-tail.
8	*Trifolium repens.*	Creeping or Dutch Clover.
9	*Crepis tectorum.*	Smooth Succory Hawkweed.
10	*Achillea Millefolium.*	Yarrow.
11	*Galium verum.*	Yellow Ladies Bedſtraw.
12	*Hypochæris radicata.*	Long-rooted Hawkweed.
13	*Hieracium Piloſella.*	Mouſe-ear Chickweed.
14	*Thymus Serpyllum.*	Wild Thyme.

Turf from *Oakhanger*.

1	*Trifolium repens.*	Creeping or Dutch Clover.
2	*Holcus lanatus.*	Meadow Soft Graſs.
3	*Poa annua.*	Common dwarf Poa.
4	*Agroſtis capillaris.*	Fine panicled Agroſtis.
5	——— *paluſtris.*	Marſh Agroſtis.

Turf from *Deortun*.

1	*Ranunculus repens.*	Creeping Crowfoot.
2	*Lolium perenne.*	Ray Graſs or perennial Darnel.
3	*Holcus lanatus.*	Meadow ſoft Graſs.
4	*Prunella vulgaris.*	Self-heal.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Agroſtis paluſtris.*	Marſh Agroſtis.
7	*Trifolium repens.*	Creeping or Dutch Clover.
8	*Crepis tectorum.*	Smooth Succory Hawkweed.
9	*Achillæa Millefolium.*	Yarrow.

Turf from *Glynd Hill*.

1	*Medicago lupulina.*	Black-ſeeded Medick, Trefoil or Nonſuch.
2	*Achillæa Millefolium.*	Yarrow.
3	*Poa pratenſis.*	Smooth-ſtalk'd Meadow Graſs.

Turf from *Glynd Hill*.

4	*Avena flaveſcens.*	Yellow Oat Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	——— *ovina.*	Sheeps Feſcue Graſs.
7	*Hieracium Piloſella.*	Mouſe-ear Hawkweed
8	*Agroſtis capillaris.*	Fine panicled Agroſtis.
9	*Trifolium repens.*	Creeping or Dutch Clover.
10	*Thymus Serpyllum.*	Wild Thyme.

Turf from *Short Heath*.

1	*Feſtuca bromoides.*	Barren Feſcue Graſs.
2	*Aira præcox.*	Early Aira.
3	*Juncus campeſtris.*	Hairy Ruſh.
4	*Poa annua.*	Common dwarf Poa.
5	*Agroſtis capillaris.*	Fine panicled Agroſtis.

Turf from *Mount Cabron*.

1	*Rumex acetoſa.*	Common Sorrel Dock.
2	*Daucus carota.*	Wild Carrot.
3	*Medicago lupulina.*	Black-ſeeded Medick, Trefoil or Nonſuch.
4	*Poterium ſanguiſorba.*	Burnet.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Avena flaveſcens.*	Yellow Oat Graſs.

Turf from *Ringmer Down*.

1	*Linum catharticum.*	Purging Flax.
2	*Scabioſa columbaria.*	Sheeps Scabious.
3	*Ornithopus perpuſillus.*	Bird's-foot.
4	*Avena flaveſcens.*	Yellow Oat Graſs.
5	*Feſtuca duriuſcula.*	Hard Feſcue Graſs.
6	*Trifolium repens.*	Creeping or Dutch Clover.
7	*Hypochæris radicata.*	Long-rooted Hawkweed.
8	*Crepis tectorum.*	Smooth Succory Hawkweed.
9	*Lotus corniculata.*	Bird's-foot Trefoil.
10	*Juncus campeſtris.*	Hairy Ruſh.
11	*Hieracium piloſella.*	Mouſe-ear Hawkweed.
12	*Feſtuca ovina.*	Sheeps Feſcue Graſs.
13	*Thymus Serpyllum.*	Wild Thyme.
14	*Poa pratenſis.*	Smooth-ſtalk'd Meadow Graſs.

Theſe experiments prove that our downs and commons, which we in general conſider as more free from weeds than moſt of our paſtures, are altogether an aſſemblage of different plants; and our meadows are much the ſame. It muſt be allowed that there is a conſiderable difference in them; one meadow, or tract of land, ſhall naturally contain a greater number of good graſſes than another; another ſhall produce little more than a mixture of unprofitable weeds, ſuch as *Crowfoot*, particularly the creeping ſort, *Docks*, *Sorrel*, *Thiſtles*, *Mallows*, *Yarrow*, *Knapweed*, *Nettles*, *Ragwort*, *&c.* moſt of which having ſtrong perennial or creeping roots, continue in the ground, impoveriſh it, and overun the few good graſſes there are; ſo that the ground is very little worth. If the ground be manured, the unprofitable and noxious plants are thereby benefited as well as the graſs; for it is the extremity of folly to ſuppoſe that manure ſhall produce good plants if the roots or ſeeds of them were not in the ground before. It muſt be allowed, however, that if there be in the meadow any ſtrong growing graſſes, they may from manure overtop and deſtroy many annual plants, but not thoſe above-mentioned, which with many others, will grow with their growth and ſtrengthen with their ſtrength.

But it is not this kind of weed alone, which, perhaps, are the moſt miſchievous; theſe being viſible and known to the Farmer may be deſtroyed; but at the ſame time the ground may be overun with bad graſſes, which not being ſo eaſily diſtinguiſhed by the Farmer, cannot be ſo readily deſtroyed. Now graſſes may be conſidered as bad on ſeveral accounts: they may, though good in themſelves, produce ſo ſmall a crop as to be worth little or nothing, as the *early* and *ſilver Hair Graſs* and *Wall Poa*: they may, either from their rankneſs, roughneſs, or ſome other qualities not perceptible to us, be ſuch as cattle are not fond of, as *Cats-tail Graſs*, *Rough Cocks-foot* and ſome others: they may die on the ground, and give the meadows a dead and diſagreeable appearance in the winter, as ſome of the ſpecies of *Agroſtis*: or they may blow late in the ſummer, and be not fit for cutting 'till moſt of the good graſſes are decayed and gone off: and thus a meadow may be filled with noxious plants as effectually as if they were more evidently ſo.

Surely then it muſt be worth the perſons while, who would wiſh to lay down his land for meadow or paſture, or improve what is already bad, to be at ſome pains and expence about it, and ſow it with as much caution as he would to produce a crop of fine Wheat; the more ſo, indeed, as when his land is once filled with good graſſes, it remains a good meadow, or good paſture for ever, which will always look pleaſing, and if properly manured, and the ſeaſon prove not remarkably unfavourable, will each year produce a plentiful crop.

I have already obſerved, in ſpeaking of the *Poa pratenſis*, that a good meadow muſt conſiſt of a variety of graſſes, which ought all to come into bloom nearly at the ſame time; and if the graſſes be of the right kinds, they will begin to blow, and the whole meadow be fit for mowing the laſt week in May. The advantages of this early hay-making are very conſiderable: this part of the year is very often extremely favourable in point of weather to the making of hay: it is not poſtponed ſo as to interfere with the harveſt: cattle may be turned the ſooner into the fields to graze; or another crop of hay be produced in good time for the ſecond making.

ALOPECURUS MYOSUROIDES. FIELD FOXTAIL GRASS.

ALOPECURUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Cor.* 1-valvis?

Rai Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

ALOPECURUS *myoſuroides* ſpica cylindrica longiſſima, glumis glabris; culmo ſuberecto. *Hudſon Fl. Angl. p.* 23.

ALOPECURUS *Agreſtis* culmo ſpicato erecto, glumis lævibus. *Lin. Syſt. Vegetab. p* 93. *Sp. Pl. p.* 89.

ALOPECURUS culmo erecto, ſpicato, calyce ciliato. *Haller hiſt. helv. p.* 249.

GRAMEN Typhoides ſpica anguſtiore. *Bauhin Pin.* 4.

GRAMEN cum cauda muris purpuraſcente. *I. Bauhin.* 2. *p.* 473.

GRAMEN ſpicatum, ſpica cylindracea tenuiſſima longiore. *Scheuch. Gram.* 69.

GRAMEN *myoſuroides* majus, ſpica longiore, ariſtis rectis. *Raii Syn. p.* 397, The greater Mouſe-tail Graſs.

GRAMEN alopecuroides ſpica longa majus et minus. *Parkinſon* 1169.

GRAMEN alopecuroides minus. *Gerard emac.* 10. *Lightfoot Fl. Scot. p.* 91. *Schreber. Gram.* 140. *t.* 19. *fig.* 2.

RADIX annua, fibroſa, fuſca.

CULMUS pedalis, erectus, baſi ſæpe infractus, rigidiuſculus, teres, geniculatus.

FOLIA triuncialia, ad duas lineas lata, lævia, ſtriata, baſi membranâ obtuſâ inſtructa.

SPICA longa, tenuis, ſubcylindracea, purpuraſcens.

SPICULÆ unifloræ, ovato-acutæ, in ſpicam imbricatim congeſtæ, externe convexulæ, interne planæ, *fig.* 1.

CALYX: GLUMA bivalvis, uniflora; valvulæ ſubæquales, muticæ, nervoſæ, *baſi annulo cinctæ*, *fig.* 2, 3.

COROLLA univalvis, valvulâ calyce paulo longiore, membranaceâ, lævi, *fig.* 4, Ariſtâ recta, e baſi valvulæ exſerta, ſpiculâ duplo fere longiore inſtructa, *fig.* 5.

STAMINA: FILAMENTA tria, capillaria, erecta, valvulis calycinis duplo longiora: ANTHERÆ oblongæ, utrinque furcatæ, *fig.* 6.

PISTILLUM: GERMEN minimum, *fig.* 7: STYLUS brevis, baſi tumidus, *fig.* 8: STIGMATA duo, ſetacea villoſa apice reflexa, *fig.* 9.

SEMEN unicum, minimum, ſubrotundum, corollæ et calyce obveſtitum, *fig.* 10.

ROOT annual, fibrous, and brown.

STALK a foot high, upright, often crooked at bottom, ſtiffiſh, round, and jointed; the joints ſmooth and purple.

LEAVES about three inches long and two lines broad, ſmooth, ſtriated, furniſhed at bottom with an obtuſe membrane.

SPIKE long, ſlender, ſomewhat cylindrical, and purpliſh.

SPICULÆ uniflorous, of a pointed oval ſhape, lying cloſely one over another in a ſpike, externally roundiſh, internally flat, *fig.* 1.

CALYX: a GLUME of two valves, containing one flower; the valves nearly equal, not terminated by any ſhort Ariſta, ſtrongly rib'd, and *ſurrounded at bottom by a ring*, *fig.* 2, 3.

COROLLA of one valve, the valve a little longer than the calyx, membranous, and ſmooth, *fig.* 4, furniſhed with a ſtraight Ariſta, which proceeds from the baſe of the valve, and is nearly twice the length of the ſpicula, *fig.* 5.

STAMINA: three FILAMENTS, very fine, upright, twice the length of the valves of the calyx: ANTHERÆ oblong, and forked at each end, *fig.* 6.

PISTILLUM: GERMEN very ſmall, *fig.* 7: STYLE ſhort, ſwelled at bottom, *fig.* 8: STIGMATA two, tapering, villous, bent back at top, *fig.* 9.

SEED one, very minute, encloſed by the corolla and calyx, *fig.* 10.

THE *Field Foxtail Graſs*, with reſpect to agriculture, may be conſidered rather as a weed than as an uſeful paſture graſs.

It is very common in cultivated ground; and often abounds ſo much in corn fields, as to be prejudicial, among rubbiſh, and on banks by the ſides of fields, it is alſo frequently found; but ſcarce ever in meadows.

It flowers early, and continues to bloſſom till Autumn; and comes into bloom the quickeſt, after being ſown, of any graſs that I have hitherto noticed.

It is diſtinguiſhed from the other ſpecies of the ſame genus, by its long ſlender ſpike, which tapers to a point, and has ſome reſemblance to a mouſes tail, whence J. BAUHINE's and Mr. HUDSON's names. This ſpike is generally of a purpliſh colour, at leaſt on that ſide which is moſt expoſed to the ſun; though ſometimes the whole ſpike appears of a whitiſh colour. The form of the ſpike, and its place of growth, will, in general, point out this ſpecies plainly enough. But if theſe ſhould be found deficient, the ſtudent may have recourſe to the annulus or ring, which ſurrounds the baſe of each ſpicula, *vid. fig.* 3.

I have found this ſpecies effected with the diſeaſe called *Ergot*, deſcribed under the *Flote Feſcue Graſs*.

Alopecurus myosuroides

BROMUS HIRSUTUS. HAIRY-STALK'D BROME-GRASS.

BROMUS *Linnæi Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis. *Spicula* oblonga, teres, diſticha; ariſta infra apicem.

Raii Syn. Gen. 27. GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

BROMUS *hirſutus* panicula nutante ſcabra, ſpiculis teretibus ſublinearibus decemfloris, ariſtis rectis, vaginis foliorum hirſutis.

BROMUS *ramoſus* panicula nutante ſcabra, ſpiculis linearibus decemfloris, ariſta longioribus, foliis ſcabris. *Hudſon Fl. Angl. p.* 40.

BROMUS foliis hirſutis, per oras aſperrimis, locuſtis glabris, teretibus, novemfloris. *Haller hiſt. n.* 1503.

BROMUS *giganteus. Scopoli Flor. Carn.* var. 2. villoſa et major.

GRAMEN Avenaceum dumetorum panicula ſparſa. *Raii Syn. p.* 415. *Hiſt. Plant. p.* 1289. Buſh or Wood Oat-Graſs, with a ſparſed panicle.

GRAMEN Avenaceum dumetorum paniculatum majus hirſutum. *H. Ox.* 3. 213. 27.

RADIX perennis, plurimis fibris, flexuoſis, flaveſcentibus inſtructa.

CULMUS tripedalis, ad orgyalem aut etiam ſupra, erectus, tribus plerumque nodis articulatus, ſolidus, ſtriatus.

FOLIA: *Vagina* ſtriata, *pilis longis, crebris, rigidiuſculis, deorſum verſis hirſuta: Folia* ipſa pedalia, ſemuncialia, deflexa, ſtriata, rarioribus et brevioribus pilis iiſque ad margines et mediam coſtam præcipue donata.

PANICULA pedalis, ſparſa, rami binati aut ternati, patentes, nutantes, ſcabri, ſæpe flexuoſi.

SPICULÆ plerumque binæ, ſeſquiunciales, tenues, teretiuſculæ, rectæ, vix hirſutæ, decemfloræ, ad baſin annulo diaphano notatæ, *fig.* 3: ARISTÆ breves, ſcabræ, rectiuſculæ, *fig.* 1.

CALYX: GLUMA bivalvis, *fig.* 2; valvulis inæqualibus, majore concavâ, interne nitidâ, trinerve, mucronata, nervis ſcabris, minore unicarinatâ acuminatâ.

COROLLA: GLUMA bivalvis, valvulis inæqualibus, exteriore trinerve, nervis exſtantibus, nervo medio in Ariſtam rectiuſculam Corollâ breviorem deſinente, interiore planiuſculâ, ciliatâ, breviore, *fig.* 4, 5, 6.

NECTARIUM GLUMULÆ duæ ad baſin Germinis, *fig.* 8.

STAMINA: FILAMENTA tria, capillaria: ANTHERÆ bifurcæ, flavæ, *fig.* 7.

PISTILLUM: GERMEN ſubovatum, baſi nudum, apice villoſum: STYLI duo, uſque ad baſin ramoſi, *fig.* 10.

SEMEN planiuſculum, ariſtatum, glumis adhærentibus, *fig.* 11, 12, 13.

ROOT perennial, furniſhed with numerous, crooked, yellowiſh fibres.

STALK from three to ſix feet high, or more, upright, conſiſting generally of three joints, ſolid and finely grooved.

LEAVES: the *ſheath* ſtriated, *covered with numerous long hairs, which are ſomewhat rigid, and bend backwards:* the *Leaves* themſelves a foot long, and half an inch broad, beſet with fewer and ſhorter hairs, and thoſe chiefly at the edges and midrib.

PANICLE a foot long, ſpreading, the branches growing two or three together, hanging down, rough, and often crooked.

SPICULÆ generally growing two together, an inch and a half long, ſlender, roundiſh, ſtraight, ſcarcely hirſute, containing ten flowers, and marked at the baſe with a pellucid ring, *fig.* 3. The ARISTA ſhort, rough, and nearly ſtraight, *fig.* 1.

CALYX: a GLUME of two valves, *fig.* 2; the valves unequal; the larger one concave, and ſhining within, having three ribs, and terminating in a ſhort point, the ribs rough; the ſmaller one having only one rib, and a more tapering point.

COROLLA: a GLUME of two valves, the valves unequal, the exterior one having three prominent ribs, the middle one of which terminates in a ſtraightiſh Ariſta, ſhorter than the Corolla; the inner one flattiſh, edged with hairs, and ſhorter than the other, *fig.* 4, 5, 6.

NECTARY; two little GLUMES at the baſe of the Germen, *fig.* 8.

STAMINA: three FILAMENTS, very fine: ANTHERÆ forked and yellow, *fig.* 7.

PISTILLUM: GERMEN ſomewhat oval, naked at bottom, at top villous: STYLES two, branched quite to the bottom, *fig.* 10.

SEED flattiſh, terminated by an Ariſta, the Glumes adhering to it, *fig.* 11, 12, 13.

THAT the plant here figured, is not the *Bromus ramoſus* of LINNÆUS, I have learned from Dr. SOLANDER and Mr. BANKS, whoſe authority in this matter will not be controverted.

I have therefore called it *hirſutus*, from a wiſh that a trivial name might be given it, which ſhould not only characterize the plant, but at the ſame time, diſtinguiſh it from a Graſs which is undoubtedly often miſtaken for it, as it frequently grows with it, is nearly of the ſame height, and flowers about the ſame time: I mean the *Bromus giganteus* of LINNÆUS, figured by SCHREBER, the leaves and ſtalks of which are *perfectly ſmooth.*

The *Bromus hirſutus* is the talleſt of our Engliſh graſſes, often exceeding ſix feet in height, which renders it a very conſpicuous graſs. The *Feſtuca elatior*, and *Bromus giganteus*, will however often grow nearly as high in particular ſituations.

It occurs in moſt of our hedges in the environs of London, particularly about *Hampſtead*; abundantly alſo in *Kent*; and flowers in June and July.

Excluſive of its height before mentioned, it is diſtinguiſhed from all our other graſſes by the hairineſs of its ſtalk, or rather the ſheaths of the leaves which cover it; and this, ſo far as I have hitherto obſerved, is an infallible criterion.

It appears to be too coarſe a graſs to be cultivated for cattle; and we do not learn that it has been applied to any other purpoſes.

Bromus hirsutus

Sansom Sculp.

GALIUM *APARINE*. CLEAVERS OR GOOSE GRASS.

GALIUM *Linnæi. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cor. 1-petala, plana. *Sem.* 2, ſubrotunda.

Raii Gen. 12. HERBÆ STELLATÆ.

GALIUM *Aparine* foliis octonis lanceolatis, carinis ſcabris retrorſum aculeatis, geniculis villoſis, fructibus hiſpidis. *Linnæi Syſt. Vegetab. p.* 127. *Sp. Pl.* 157. *Flor. Suecic. p.* 45.

GALIUM caule ſerrato, foliis ſenis, linearibus, lanceolatis, ſerratis, petiolis unifloris. *Haller hiſt. helv. n.* 723.

GALIUM *Aparine. Scopoli Fl. Carniol. n.* 157.

APARINE vulgaris. *Bauhin Pin.* 334.

APARINE *Gerard emac.* 1122. *Parkinſon* 567. *Raii Syn. p.* 225, Cleavers or Gooſe-Graſs. *Hudſon Fl. Angl. p.* 57. *Oeder Flor. Dan. icon.* 495. *Lightfoot Flor. Scot. p.* 117.

RADIX annua, fibroſa.
CAULIS tetragonus, angulis retrorſum aculeatis, debilis, fragilis, geniculatus, baſi articulorum villoſus, ramoſiſſimus, ad quatuor et ultra pedes altus, proxima quæque ſcandens, adhæreſcenſque.

RAMI oppoſiti.
FOLIA ſena ad octona, lanceolato-linearia, mucronata, ſuperne ſcabra, inferne glabra margine et carina retrorſum aculeatis.

FLORES pauci, parvi, albidi, petiolis ſcabris inſidentes.
CALYX nullus.
COROLLA minima, monopetala, rotata, albida, quadripartita, laciniis ovato-acutis, *fig.* 1.

STAMINA: FILAMENTA quatuor, brevia, alba: ANTHERÆ luteæ, *fig.* 2.
PISTILLUM: GERMEN didymum, inferum, villoſum: STYLI duo Corollâ breviores: STIGMATA globoſa, *fig.* 4, 5, 6.
PERICARPIUM: BACCÆ duæ, ſiccæ, globoſæ, coalitæ, hiſpidæ, aculeis recurvis, *fig.* 7.

SEMINA ſolitaria, reniformia, magna.

ROOT annual, fibrous.
STALK quadrangular, the angles furniſhed with aculei or prickles, which bend backward, weak, brittle, and jointed; the bottom of the joints villous, very much branched, growing to four feet or more high, climbing and adhering to every plant near it.
BRANCHES oppoſite.
LEAVES growing ſix or eight together, of a ſhape betwixt lanceolate and linear, terminating in a point, rough on the upper ſide, on the under ſide ſmooth, the edge and midrib, or keel rough, with ſharp prickles bending backwards.
FLOWERS few, ſmall, and whitiſh, ſitting on rough foot-ſtalks.
CALYX wanting.
COROLLA very minute, monopetalous, wheel-ſhaped, of a whitiſh colour, divided into four oval pointed ſegments, *fig.* 1.
STAMINA: four ſhort white FILAMENTS: ANTHERÆ yellow, *fig.* 2.
PISTILLUM: GERMEN double, below the Corolla, villous: STYLES two, ſhorter than the Corolla: STIGMATA globular, *fig.* 4, 5, 6.
SEED-VESSEL: two dry globular BERRIES, ſlightly joined together, rough with prickles bending back at the point, *fig.* 7.
SEEDS ſingle, ſomewhat kidney ſhaped, and large.

THIS plant has moſt probably obtained its name of *Cleavers*, from its cleaving or adhering to whatever it comes in contact with, which it is in a peculiar manner enabled to do, by its hooked prickles; and that of *Gooſe-Graſs* from its being a favourite food of Geeſe.

It abounds in all cultivated ground, and by its quick growth, is apt to overpower many plants both in the garden and field. Young quickſet hedges, in a particular manner, ſhould be carefully freed from it. It is an early blowing plant, and produces its ſeed from June to September.

DIOSCORIDES obſerves, that the ſhepherds made uſe of it as a ſtrainer to filter their milk through.

If the accounts given of it, by writers on the Materia Medica, are to be depended on, it is not without conſiderable medicinal powers.

The expreſſed juice of the ſeeds, ſtalks, and leaves, are powerful againſt the bites of vipers and ſpiders; and the ſame dropt into the ears, cures the pain of them; *Raii hiſt. p.* 484.

The herb mixed with lard, diſſolves ſcrophulous ſwellings; *idem.*

The tops are an ingredient in ſpring broth, for purifying the blood; *Rutty Mater. Med.*

The ſeeds have been made uſe of by ſome inſtead of coffee; *idem.*

A ſtrong decoction of the herb, taken to the quantity of twelve ounces, morning and evening, has brought away gravel in many caſes; *idem.*

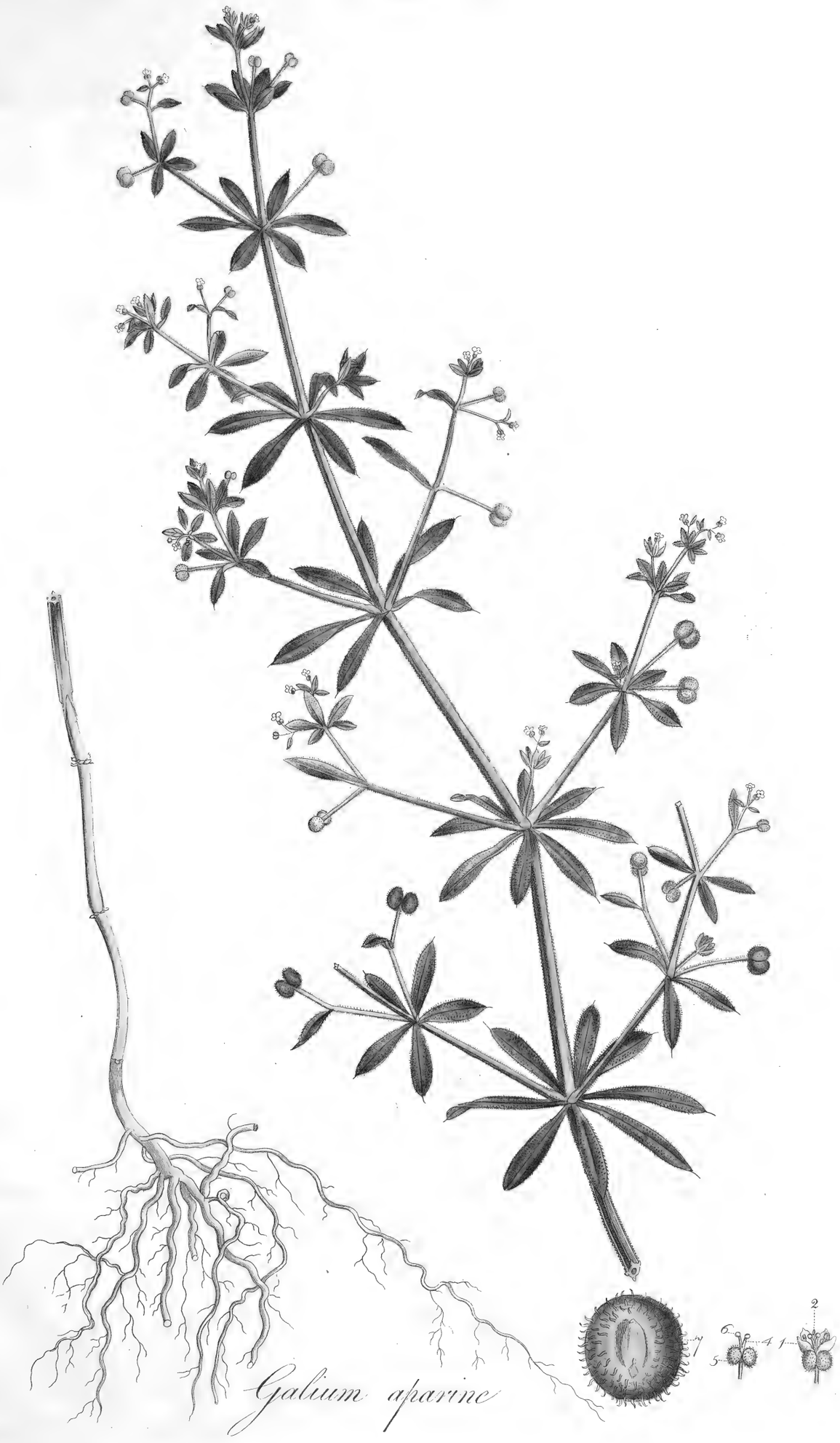
The root eaten by birds, has tinged their bones of a red colour, as in experiments made with madder; *idem.*

A decoction of the plant has proved highly ſerviceable in a ſimple gonorrhæa; *D. Palmer apud Dale.*

Of late this plant has been much celebrated in ſcrophulous and cancerous ſores: but experiments carefully made with it, in St. Thomas's Hoſpital, have not turned out in its favour.

It is eaten by horſes, kine, ſheep, and goats, but refuſed by ſwine; *Linn. Amæn. Acad.*

The Calyx in this ſpecies, is certainly wanting.



Galium aparine

PLANTAGO LANCEOLATA. NARROW-LEAVED PLANTAIN OR RIBWORT.

PLANTAGO *Linnæi Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. 4-fidus. *Cor.* 4-fida: limbo reflexo. *Stamina* longiſſima. *Caps.* 2-locularis, circumſciſſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

PLANTAGO lanceolata foliis lanceolatis, ſpica ſubovata nuda, ſcapo angulato. *Linn. Syſt. Vegetab. p.* 131.

PLANTAGO foliis lanceolatis quinquenerviis, ſcapo nudo, ſpica ovata. *Haller hiſt. n.* 656.

PLANTAGO *lanceolata. Scopoli Fl. Carniol. p.* 108. *n.* 163.

PLANTAGO anguſtifolia major. *Bauhin Pin.* 189.

PLANTAGO quinquenervia. *Gerard emac.* 422.

PLANTAGO quinquenervia major. *Parkinſon* 495. *Raii Syn. p.* 314, Ribwort or Ribwort-Plantain. *Hudſon Fl. Angl. p.* 52. *Oeder Fl. Dan. icon.* 437.

RADIX perennis, fuſca, fibris multis inſtructa, per ætatem præmorſa.

FOLIA longe petiolata, baſi purpurea, lanuginoſa, lanceolata, quoad latitudinem inſigniter variantia, quinquenervia, rariter dentata, hirſutula, erecta, nonnunquam vero patentia.

SCAPUS foliis longior, ſimplex, ſulcato-anguloſus, ſubtortuoſus, erectus.

SPICÆ ovato-oblongæ, nigricantes.

BRACTÆA ſingulo floſculo impoſita, ovato-acuminata, concava, *fig.* 1.

CALYX: PERIANTHIUM triphyllum, foliolis inæqualibus, duo lateralia cymbiformia, acuta, *fig.* 3, dorſale ovatum, obtuſum, emarginatum, lineis duabus viridibus notatum, *fig.* 2.

COROLLA monopetala, tubuloſa, membranacea, cylindraceo-globoſa, limbus quadripartitus, laciniis ovato-acutis, patentibus, dempto calyce reflexis, *fig.* 4.

STAMINA: FILAMENTA quatuor longiſſima: ANTHERÆ albidæ aut flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: STYLUS filiformis, ſtaminibus dimidio brevior: STIGMA ſimplex, *fig.* 6.

PERICARPIUM: CAPSULA ovata, bilocularis, circumſciſſa, diſſepimento libero, *fig.* 7, 8.

SEMINA duo, oblonga, nitida, ſuccinei coloris, hinc convexa inde concava, *fig.* 9, 10, 11.

ROOT perennial, of a brown colour, furniſhed with numerous fibres, when grown old appearing as if bitten off.

LEAVES ſtanding on long foot-ſtalks, purple and woolly at bottom, lanceolate, varying remarkably in their breadth, having five ribs, and a few teeth at the edges, ſomewhat hairy, upright, but ſometimes ſpreading.

FLOWERING-STALK longer than the leaves, ſimple, angular and grooved, ſlightly twiſted and upright.

SPIKES of an oval oblong ſhape and blackiſh colour.

BRACTEÆ or floral leaf, placed under each floſcule, oval-pointed, and concave, *fig.* 1.

CALYX: a PERIANTHIUM of three unequal leaves, the two ſide ones boat-ſhaped, and pointed, *fig.* 3; the back leaf oval, obtuſe, emarginate, *fig.* 2, and marked with two green lines.

COROLLA monopetalous, tubular, membranous, of a form betwixt globular and cylindrical; the limb quadripartite; the ſegments of an oval pointed ſhape, and ſpreading, on the removal of the calyx turning back, *fig.* 4.

STAMINA: four very long FILAMENTS: ANTHERÆ white or yellowiſh, *fig.* 5.

PISTILLUM: GERMEN oval: STYLE filiform, half the length of the ſtamina: STIGMA ſimple, *fig.* 6.

SEED-VESSEL: an oval CAPSULE of two cavities, dividing horizontally in the middle, the diſſepimentum or partition looſe, *fig.* 7, 8.

SEEDS two, oblong, ſhining, of an amber colour, convex on one ſide and concave on the other, *fig.* 9, 10, 11.

THE Farmers in general conſider this ſpecies of *Plantain* as a favourite food of ſheep, and other cattle, hence it is frequently recommended in the laying down of meadow and paſture land; and the ſeed is for that purpoſe kept in the ſhops. How far the predilection of cattle for this herb is founded in truth we cannot at preſent determine; nor do we pretend to ſay how far it is œconomical (ſuppoſing the fact to be ſo) to ſubſtitute this plant in the room of others which produce a much greater crop, and which they ſhew no averſion to. We ſhould be rather inclined to think, that *Plantain* (or *Rib-Graſs* as it is called) ſhould be but ſparingly made uſe of, particularly if the Farmers chief aim be a crop.

When the *Plantain* grows among paſturage, its leaves are drawn up to a conſiderable height: but when it occurs in a dry and barren ſoil, they are ſhorter, broader, and more ſpread on the ground; and ſometimes they aſſume a ſilvery hue.

It grows ſpontaneouſly by the ſides of roads, and in dry paſtures; flowering early in the ſummer.

Plantago lanceolata.

PLANTAGO MAJOR. COMMON PLANTAIN.

PLANTAGO *Linnæi. Gen. Pl.* TETRANDRIA MONOGYNIA.
Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

PLANTAGO *major* foliis ovatis glabris, ſcapo tereti, ſpica floſculis imbricatis. *Lin. Syſt. Vegetab. p.* 131. *Spec. Plant. p.* 163. *Fl. Suecic. n.* 129.

PLANTAGO foliis petiolatis, ovatis, glabris; ſpica cylindrica. *Haller. hiſt. Helv. n.* 660.

PLANTAGO *major. Scopoli. Fl. Carniol. n.* 161.

PLANTAGO latifolia ſinuata. *Bauhin pin.* 189.

PLANTAGO latifolia *Ger. emac.* 419.

PLANTAGO latifolia vulgaris. *Parkinſon.* 493. *Raii Syn.* 314. Great Plantain or Waybread. *Hudſon Fl. Angl. p.* 51. *Oeder. Fl. Dan. ic.* 461. *Lightfoot. Fl. Scot. p.* 117.

RADIX vetuſta pollicaris, præmorſa, plurimis fibris albidis alte demiſſis, terram firmiter apprehendens.

FOLIA petiolata præmorſa, ovata, ſeptemnervia, glabra, juniora vero hirſutula, palmaria, margine minutim remoteque dentata.

PETIOLI longi, ſubtus convexi, ſupra concavi, baſi ſubvaginati.

SCAPI teretes, erecti, pubeſcentes, foliis longiores.

SPICÆ cylindricæ, longæ, floribus undique imbricatæ.

BRACTEA lanceolata, concava, ſub ſingulo floſculo. *fig.* 1.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, obtuſis, lævibus, ſubæqualibus, perſiſtentibus. *fig.* 2.

COROLLA monopetala, perſiſtens, marceſcens; TUBUS cylindrico-globoſus, brevis, *laciniis* ovato-acutis, reflexis. *fig.* 3.

STAMINA: FILAMENTA quatuor, capillaria, patentia, corollâ multo longiora; ANTHERÆ purpureæ, biloculares, ſingulo loculo baſi mucrone terminato. *fig.* 4.

PISTILLUM: GERMEN ovatum; STYLUS filiformis, ſtaminibus brevior, villoſus; STIGMA ſimplex. *fig.* 5. 6.

PERICARPIUM: CAPSULA ovata, circumſciſſa, fuſca, continens SEMINA circiter 20 inæqualia, fuſca. *fig.* 7. 8. 9. 10.

ROOT when old the thickneſs of ones thumb, ſtumped, laying ſtrong hold of the earth by its fibres, which ſtrike deeply into it and are of a whitiſh colour.

LEAVES ſtanding on footſtalks, oval, having ſeven ribs, ſmooth, but ſomewhat hairy when young, about four fingers in length, the edge minutely and remotely indented.

FOOT-STALKS of the leaves long, convex on the under ſide, concave above, each forming a kind of ſheath at its baſe.

FLOWER-STALKS, round, upright, pubeſcent, and longer than the leaves.

SPIKES cylindrical, long, ſurrounded on every ſide with flowers lying one over another.

BRACTEA lanceolate, and hollow, under each flower. *fig.* 1.

CALYX: a PERIANTHIUM of four leaves, which are oval, concave, obtuſe, ſmooth, nearly equal and continuing. *fig.* 2.

COROLLA monopetalous, continuing, of a withered appearance; TUBE of a cylindrical globular form, and ſhort; the SEGMENTS oval, pointed, and turned back. *fig.* 3.

STAMINA: FILAMENTS four, very ſmall, ſpreading, much longer than the corolla; ANTHERÆ purple, bilocular, each cell terminating at bottom in a point. *fig.* 4.

PISTILLUM: GERMEN oval; STYLE filiform, ſhorter than the Stamina, villous; STIGMA ſimple. *fig.* 5. 6.

SEED-VESSEL: an oval CAPSULE, dividing horizontally in the middle, and containing about 20 unequal brown SEEDS. *fig.* 7. 8. 9. 10.

This ſpecies of *Plantain* grows plentifully in Meadows, Gardens, and by the ſides of Paths, and ſeems to flouriſh moſt in places moderately trodden on, whence perhaps its name of *Way-bread.*

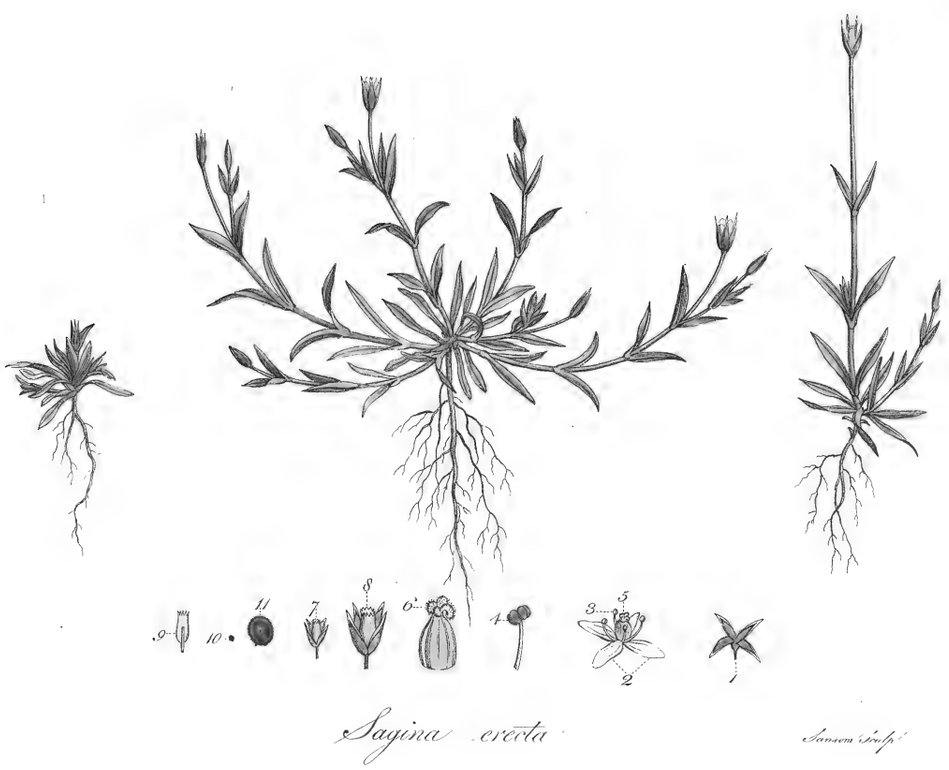
In rich ground the leaves often grow to an enormous ſize; and in gardens we often find cultivated, a very ſingular and monſtrous variety of this plant, the *Plantago roſea* of ſome botaniſts, or Roſe Plantain of the Gardeners, in which the flowers appear to be converted into leaves, which ſpread open ſomewhat like a roſe.

Cattle in general appear very readily to eat the leaves, and the ſeeds are well known to afford food to many of the ſmall birds.

It uſed to be held in conſiderable eſteem as a Medicine of the vulnerary kind: In the preſent practice the diſtilled water is ſometimes made uſe of, and chiefly in ulcerations of the Mouth and Throat. By the common people the leaves are often applied to freſh wounds, and burns.

It differs remarkably in the number of its ſeeds from the *Plantago lanceolata*, in which we conſtantly find two large ſeeds; but in this I have moſt commonly found about twenty ſmall ones; yet what is very extraordinary, RAY and SCOPOLI mention its having only two.

Plantago major



Sagina erecta

Samuel Fisher

SAGINA ERECTA. UPRIGHT PEARLWORT.

SAGINA *Linnæi Gen. Pl.* TETRANDRIA TETRAGYNIA.

Cal. 4-phyllus. *Petala* 4. *Caps.* 1 locularis, 4 valvis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAGINA *erecta* caule erecto ſubunifloro. *Linn. Syſt. Vegetab. p.* 142. *Sp. Pl. p.* 185.

ALSINELLA foliis caryophylleis. *Cat. Giſs.* 47.

SAGINA ſcapis unifloris. *Guett. Stamp. p.* 276. *Dalib. Paris. p.* 56.

ALSINE verna glabra. *Magn. Monſp.* 14. *Vaill. Paris.* 6. *t.* 3. *fig.* 2. *Raii Syn. fig.* 4. *t.* 15. *p.* 344, the leaſt Stich-wort.

Hudſon. Fl. Angl. ed. 2. *p.* 73.

Lightfoot. Fl. Scot. p. 125.

RADIX annua, ſimplex, fibroſa.

CAULES plerumque plures, ſupra terram expanſi, aſcendentes, bi aut triunciales, teretes, purpuraſcentes, læves, geniculati, uniflori, biflori aut etiam triflori.

FOLIA glauca, inferiora linearia, ſeſſilia, rigida, lineâ longitudinali exarata, caulina connata, ſæpe recurvata, latiora, magiſque acuminata.

CALYX: PERIANTHIUM tetraphyllum, perſiſtens, foliolis ovato acuminatis, erectis, plerumque clauſis, margine membranaceis albidis, lævibus, glaucis, *fig.* 1.

COROLLA: PETALA quatuor calyce breviora, alba, oblonga, obtuſa, ſubſtriata, apice indiviſa, *fig.* 2, auct.

STAMINA: FILAMENTA quatuor, intra petala locata, petalis paulo breviora, ſetacea: ANTHERÆ ſubrotundæ, didymæ, flaveſcentes, *fig.* 3, 4.

PISTILLUM: GERMEN ovatum: STYLUS breviſſimus, longitudine ſtaminum: STIGMATA quatuor, villoſa, reflexa, *fig.* 5, 6.

PERICARPIUM: CAPSULA oblongo ovata, membranacea, unilocularis, univalvis, calyce paulo longior, ore plerumque decemdentato, *fig.* 7, 9, *fig.* 8, auct.

SEMINA plurima, e fuſco aurantiaca; ſubreniformia, ſcabra, *fig.* 10, 11.

ROOT annual, ſimple, and fibrous.

STALKS for the moſt part ſeveral, expanded on the earth, and afterwards riſing upright, from two to three inches high, round, purpliſh, ſmooth, jointed, ſupporting from one to three flowers.

LEAVES glaucous; the lower ones linear, ſeſſile, rigid, grooved; thoſe on the ſtalk uniting at their baſe, often bent back, broader, and more pointed.

CALYX: a PERIANTHIUM of four leaves, permanent, the leaves oval and pointed, upright, generally cloſed, membranous and whitiſh on the edges, ſmooth and glaucous.

COROLLA: four PETALS ſhorter than the calyx, white, oblong, obtuſe, ſomewhat ſtriated, and undivided at top, *fig.* 2. magnified.

STAMINA: four FILAMENTS placed between the petals, and a little ſhorter than the petals, ſetaceous: ANTHERÆ roundiſh, double, of a yellowiſh colour, *fig.* 3, 4.

PISTILLUM: GERMEN oval: STYLE very ſhort, the length of the ſtamina: STIGMATA four, villous, and turning back, *fig.* 5, 6.

PERICARPIUM: an oblong, oval, membranous CAPSULE, of one cavity and one valve, a little longer than the calyx, the mouth opening generally with ten teeth, *fig.* 7, 9. *fig.* 8, magn.

SEEDS numerous, of an orange brown colour, ſomewhat kidney-ſhaped, and rough on the ſurface, *fig.* 10, 11.

IN treating of this little plant, we have been rather at at loſs whether to conſider it as a new genus, or arrange it with the *Sagina* of LINNÆUS: for though it agrees with the *Sagina* in ſome of its moſt ſtriking characters, ſuch as having a Calyx and Corolla each conſiſting of four leaves, together with four Stamina and Piſtilla, yet in its ſeed-veſſels, which probably LINNÆUS might not have ſeen in a perfect ſtate, it greatly reſembles a *Ceraſtium*; while the whole plant, in its habit and glaucous appearance, approaches nearly to the *Stellaria Holoſtea*. As there are but few genera however, whoſe ſpecies do not vary conſiderably in the parts of fructification, we have thought it moſt eligible to continue it a *Sagina*; eſpecially as it retains thoſe characters, which obviouſly diſtinguiſh it from any of the Decandrous plants.

We meet with it abundantly on moſt of the Heaths about London, particularly on *Black-heath*. It flowers in April, and ripens its ſeed in May. The calyx never opens far, ſo that the bloſſoms are not ſuffered fully to expand.

If the ſeaſon prove dry, as hath been moſt unuſually the caſe this year, 1779, the ſtalk is generally ſimple; but if the ground be moiſt, it throws out many ſtalks, which firſt ſpread on the earth, and afterwards become upright, as is repreſented in the middle figure.

CONVOLVULUS ARVENSIS. FIELD CONVOLVULUS.

CONVOLVULUS *Linnæi Gen. Pl.* PENTANDRIA-MONOGYNIA.

Cor. campanulata, plicata. *Stigm.* 2. *Caps.* 2-locularis: loculis diſpermis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CONVOLVULUS *arvenſis* foliis ſagittatis utrinque acutis, pedunculis ſubunifloris. *Lin. Syſt. Veget. p.* 168. *Sp. Pl. p.* 218. *Flor. Suecic. p.* 64.

CONVOLVULUS foliis ſagittatis, lateſcentibus, petiolis unifloris, ſtipulis remotis ſagittatis. *Haller. hiſt. helv. n.* 664.

CONVOLVULUS *arvenſis. Scopoli Fl. Carn. n.* 219.

CONVOLVULUS minor arvenſis. *Bauhin. pin.* 294.

CONVOLVULUS minor vulgaris. *Parkinſon.* 171.

SMILAX lævis minor. *Gerard emac.* 861.

Raii Syn. p. 275, Small Bindweed.

Hudſon Fl. Angl. ed. 1. *p.* 74. *ed.* 2. *p.* 88.

Lightfoot Fl. Scot. p. 140.

Oeder Fl. Dan. icon. 459.

RADIX perennis, craſſitudinis pennæ coracis, teres, albida, lacteſcens, repens, vix extirpanda.

CAULES plurimi, tenues, tortuoſi, procumbentes, ramoſi, plantas vicinas contorquendo adſcendentes et ſæpe ſuffocantes.

FOLIA alterna, haſtata, lævia, poſtice acutè hamata.

PETIOLI foliis breviores, inferne convexi, ſuperne canaliculati.

PEDUNCULI uniflori, biflori aut triflori.

CALYX: PERIANTHIUM quinquepartitum, minimum, perſiſtens, foliolis ovatis, obtuſiuſculis, *fig.* 1.

COROLLA monopetala, campanulata, patens, plicata, albo et rubro eleganter picta, interdum penitus alba, *fig.* 2.

STAMINA: FILAMENTA quinque ſubulata, alba, Corollâ dimidio breviora: ANTHERÆ ſubſagittatæ, albæ, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum, glandulâ cinctum: STYLUS filiformis, Staminibus paulo longior: STIGMATA duo, oblonga, latiuſcula, *fig.* 4, 5, 6.

PERICARPIUM: CAPSULA ſubrotunda, mucronata.

SEMINA anguloſa, fuſca.

ROOT perennial, the thickneſs of a crow quill, round, white, milky, creeping ſo as ſcarce to be eradicated.

STALKS numerous, ſlender, twiſted, procumbent, branched, twining round, and often ſuffocating the plants growing near them.

LEAVES alternate, haſtate, ſmooth, running out into two points behind.

LEAF-STALKS ſhorter than the leaves, on the lower part convex, on the upper part channeled.

FLOWER-STALKS ſupporting one, two, or three flowers.

CALYX: a PERIANTHIUM deeply divided into five ſegments, minute and permanent, the leaves oval and ſomewhat blunt, *fig.* 1.

COROLLA monopetalous, bell-ſhaped, ſpreading, plaited, elegantly painted with red and white, ſometimes wholly white.

STAMINA: five FILAMENTS, tapering, white, about half the length of the Corolla; ANTHERÆ ſomewhat arrow-ſhaped, and white. *fig.* 3.

PISTILLUM: GERMEN roundiſh, ſurrounded by a gland; STYLE filiform, a little longer than the Stamina; STIGMATA two, oblong, and broadiſh. *fig.* 4. 5. 6.

SEED-VESSEL: a roundiſh, pointed CAPSULE.

SEEDS angular, and brown.

BEAUTIFUL as this plant appears to the eye, experience proves it to have a moſt pernicious tendency in agriculture: the field of the ſlovenly farmer bears evident teſtimony of this; nor is the garden wholly exempt from its inroads.

The following experiment may ſerve to ſhow what precaution is neceſſary in the introduction of plants into a garden, eſpecially when we want them to grow in ſome particular ſituation.

Tempted by the lively appearance which I had often obſerved ſome banks to aſſume, from being covered with the bloſſoms of this *Convolvulus*, I planted twelve feet of a bank, in my garden, which was about four feet in height, with ſome roots of it: it was early in the ſpring, and the ſeaſon was remarkably dry, ſo that I ſcarce expected to ſee them grow; but a wet ſeaſon coming on, ſoon convinced me that my apprehenſions were unneceſſary, for they quickly covered the whole ſurface of the bank, to the almoſt total extirpation of every other plant. It being a generally received opinion, that if a plant was cut down cloſe to the ground, it would thereby be deſtroyed, or at leaſt very much weakened, I was determined to try the validity of this opinion by an experiment, and accordingly, the whole of the *Convolvulus* was cut down ſomewhat below the ſurface of the earth: in about a month, the bank was covered with it thicker than before. I then had recourſe to a ſecond cutting, and afterwards to a third, but all theſe were inſufficient; for now at this preſent writing (Auguſt) the bank is wholly covered with it; nor do I expect to deſtroy it, but by levelling the bank and deſtroying its roots.

This experiment ſeems to determine a matter of no ſmall conſequence in agriculture, viz. that the cutting down theſe plants which have creeping roots, rather tends to make them ſpread farther than deſtroy them; and that nothing ſhort of actual eradication, will effect the latter.

It is ſeldom that this plant is highly prejudicial to meadows, or paſtures; but many fields of corn are every year deſtroyed by it, or rendered of little value.

It flowers in June and July. The bloſſoms vary conſiderably in their colour, being ſometimes quite white, but moſt commonly painted more or leſs, with a lively red.

LINNÆUS's character of this plant, *pedunculis unifloris*, does not always hold good; the flower-ſtalks being frequently branched, and ſupporting two or three flowers.

The leaves ſometimes appear quite narrow, and the bloſſoms have been obſerved to be divided almoſt to the baſe, *vid. Ray's Synopſis, ed.* 3, *p.* 276.

Convolvulus arvensis

Solanum nigrum

SOLANUM NIGRUM. GARDEN NIGHTSHADE.

SOLANUM *Linnæi Gen. Pl.* PENTANDRIA MONOGYNIA.
Cor. rotata. *Antheræ* ſubcoalitæ, apice poro gemino dehiſcentes. *Bacca* bilocularis.
Raii Syn. Gen. 26. HERBÆ BACCIFERÆ.
SOLANUM *nigrum* caule inermi herbaceo, foliis ovatis dentato-angulatis, racemis diſtichis nutantibus. *Linnæi Syſt. Vegetab. p.* 187. *Sp. pl. p.* 266. *Fl. ſuecic. p.* 71. *Haller. hiſt. v.* 1. *p.* 249. *n.* 576.
SOLANUM nigrum, *Scopoli Fl. Carniol. p.* 258.
SOLANUM officinarum. *Bauhin pin. p.* 166.
SOLANUM vulgare. *Parkinſon.* 346
SOLANUM hortenſe, *Ger. emac.* 339.
Raii Syn. 254. *Hudſon, Fl. angl. p.* 78. *Oeder. Dan.* 460.

Tota planta contuſa tetrum odorem ſpirat.
RADIX annua, ramoſa, albida.
CAULIS pedalis aut bipedalis, ramoſiſſimus, ſubangulaſus ex foliis decurrentibus, ſcabriuſculus, ſolidus, ad geniculos paululum incraſſatus, obſcure viridis, ſeu ex viridi purpureus preſertim ad baſin et ad nodos.

RAMI alterni, cauli ſimiles.
FOLIA alterna, longe petiolata, ſubdecurrentia, ovato-acuta, anguloſo-dentata, hirſutie molli.

FLORES ſubumbellati; PETIOLUS patens *ex intermedio nodorum.*

CALYX: PERIANTHIUM quinquepartitum, foliolis ovatis perſiſtentibus, fructibus maturis paululum reflexis. *fig.* 1.
COROLLA monopetala, ſubrotata, alba, laciniis ovato acutis. *fig.* 2.

STAMINA: FILAMENTA quinque breviſſima, villoſa, alba *fig.* 4: ANTHERÆ oblongæ, flavæ, ſubcoalitæ, bilocularis, loculis apice perforatis. *fig.* 5.
PISTILLUM: GERMEN ſubrotundum, viride *fig.* 6; STYLUS ſubulatus, viridis, parte inferiore villoſa *fig.* 7; STIGMA ſubrotundum. *fig.* 8.
PERICARPIUM: BACCA rotunda, primum viridis demum nigra, bilocularis *fig.* 9.
SEMINA plurima, reniformia, flaveſcentia. *fig.* 10.

The whole plant when bruiſed ſmells very diſagreeably.
ROOT annual, branched, and whitiſh.
STALK from one foot to two feet high, very much branched, ſomewhat angular from the leaves running down the ſtalk, roughiſh, ſolid, ſomewhat ſwelled at the joints, of a dirty green, or rather a purpliſh green colour, particularly at bottom and at the joints.
BRANCHES alternate, like the ſtalk.
LEAVES alternate, ſtanding on long footſtalks, ſlightly running down the ſtalk, of an oval pointed ſhape, angularly indented, with a ſoft hairineſs.
FLOWERS growing in a kind of Umbell; FOOTSTALK of the flowers ſpreading, and *ariſing from the middle of the joint.*
CALYX: a PERIANTHIUM divided into five ſegments, which are oval, continuing, and when the fruit is ripe, turning ſomewhat back. *fig.* 1.
COROLLA monopetalous, ſomewhat wheel-ſhaped, of a white colour, the ſegments oval and pointed. *fig.* 2.
STAMINA: five very ſhort white hairy FILAMENTS, *fig.* 4. ANTHERÆ oblong, yellow, ſomewhat united, of two cavities, each having a hole at the top. *fig.* 5.
PISTILLUM: GERMEN roundiſh, and green *fig.* 6; STYLE tapering, green, the lower part villous; STIGMA roundiſh. *fig.* 8.
SEED-VESSEL: a round berry, firſt green aud afterwards black, of two cavities. *fig.* 9.
SEEDS ſeveral, kidney ſhaped and yellowiſh. *fig.* 10.

In the year 1757, Mr. GATAKER, Surgeon to the Weſtminſter Hoſpital, publiſhed a treatiſe on the internal uſe of *Solanum*, or *Nightſhade*; from an apprehenſion that he had diſcovered a medicine which, under certain regulations, might with perfect ſafety be given; and, as he imagined, with great benefit to mankind in many diſeaſes, where the medical practitioner could do little more than ſympathize with his diſtreſſed patients.

He was induced to make ſome experiments with the *Nightſhades*, from reading an account of a cancerous caſe cured by the infuſion of deadly Nightſhade; but not being able at that particular ſeaſon of the year, to procure the deadly Nightſhade, he was obliged to make uſe of the dried leaves of the *Solanum nigrum, or Garden Nightſhade*, here figured, which he found to be very powerful in its operation; even ſo ſmall a quantity as one grain weight of the leaf, infuſed in about an ounce of boiling water, would ſometimes produce a very conſiderable effect: but two or three grains ſeldom fail'd either to vomit, purge, or ſweat the patient moderately, or to increaſe the quantity of urine. It ſometimes occaſioned a head-ach, giddineſs, dimneſs, and drowſineſs; but its moſt common effects were a heat or warmth diffuſed over the whole body a few hours after taking the medicine, a plentiful ſweat ſucceeding this heat, and a gentle purging the next day: if a ſweat did not break out, an extraordinary diſcharge of urine was the conſequence, which was ſometimes followed likewiſe by a purging: one or more of the natural evacuations were almoſt always increaſed. After premiſing this general account of the action of the medicine, he proceeds to enumerate ſeveral caſes in which this medicine appeared to him to be efficacious: the principal of theſe were, two caſes of a cancerous nature;—a large ill-conditioned ſore of long ſtanding in the leg, attended with fever and inflamation—a violent bruiſe on the loins and hips;—a ſwelling, and ſeveral painful ſores on one leg;—ſeveral ſcrofulous ſores in the thigh and foot;—the body covered with ſcorbutic eruptions;—a malignant corroding ulcer in the back part of the throat;—two caſes of Dropſy;—in ſeveral cancerous caſes where it was made uſe of, very little advantage was reaped. In moſt of the above caſes, the *garden Nightſhade* was made uſe of, between which and the *deadly*, he found, as to their effects, very little difference: he found the medicine to act differently on different conſtitutions; and it was his practice to begin with half a grain of the dried leaf in infuſion, increaſing the doſe according to its effects, and repeating it every ſecond or third night.

He remarks that the *Solanum nigrum* was formerly in uſe for many diſeaſes; yet there were ſome who decried the uſe of it internally: and WEPFER gives an account of three Children poiſoned by it: nevertheleſs ſome authors mention it as uſed in food. But ſurely if an infuſion of a few grains of this plant be capable of producing ſuch violent effects on the human body, thoſe authors muſt have been miſtaken.

About the ſame time, ſome experiments were alſo made by Mr. BROMFIELD, Surgeon to St. Georges and the Lock Hoſpitals; and as the one author ſeems to have written prejudiced in favour of the Medicine, ſo the other ſeems to have had his prejudices againſt it; for we find the experiments of the latter differing widely from thoſe of the former. According to Mr. BROMFIELD, the ſymptoms were not only not relieved, but new ones were often brought on, and the patients health rather injured than benefited. In the ſeveral caſes of inflamation, ulcers, &c. where this medicine had been given, it often occaſioned pains in the ſores, nauſea, complaints of the head, temporary loſs of ſight, delirium, violent vomitings, gripings and purgings, and even death itſelf to one perſon under his own inſpection; though the doſe of the garden Nightſhade did not exceed one grain at a time.

After giving this account, we ſhall leave it to our readers to determine with what propriety it is diſregarded in the preſent practice; and would juſt remark, that from the apparently inconteſtible proofs of its deleterious qualities, perſons cannot be too nice in ſelecting their Pot-herbs, particularly thoſe who make a practice of gathering from Dunghills and Gardens, a ſpecies of *Orach*, by ſome called *Fat-hen*, by others *Lambs-quarters*, &c. as there is ſome diſtant ſimilitude betwixt the two plants, and their places of growth are the ſame.

The figure and deſcription above given, will enable any one to diſtinguiſh this plant. It is an annual, flowering in July, and producing its black berries in Autumn, which moſt probably are alſo poiſonous. It varies in ſize as well as in the hairineſs of its leaves; and the manner of the flowers growing from the middle of each joint is both ſingular and curious.

Chenopodium album

CHENOPODIUM ALBUM. WHITE GOOSEFOOT.

CHENOPODIUM *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5 phyllus, 5 gonus.

Cor. o. *Sem.* 1, lenticulare, ſuperum.

Raii. Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHENOPODIUM *album* foliis rhomboideo-triangularibus eroſis poſtice integris, ſummis oblongis, racemis erectis. *Lin. Syſt. Vegetab. p.* 216. *Spec. Plant. p.* 319. *Fl. Suecic. p.* 79.

CHENOPODIUM foliis ſubtus farinoſis, rhomboideis, dentatis, ſuperioribus integerrimis. *Haller. hiſt. n.* 1579.

CHENOPODIUM ſylveſtre opuli folio. *Vaillant, Paris.* 36. t. 7. *fig.* 1.

BLITUM Atriplex ſylveſtris dictum. *Raii Syn. p.* 154. Common wild Orache.

ATRIPLEX folio ſinuato candicante. *Bauh. pin.* 119.

ATRIPLEX ſylveſtris vulgatior ſinuata major. *Parkinſon.* 748.

ATRIPLEX vulgaris *Ger. emac.* 326. *Hudſon. Fl. Angl. p.* 91. *Lightfoot. Flor. Scot. p.* 148.

RADIX annua, fibroſa, alba.

CAULIS erectus, pedalis ad tripedalem, parum flexuoſus, ſubanguloſus et ſtriatus, ſolidus, ramoſus, lævis, ſubinde purpuraſcens. RAMI alterni.

FOLIA rhomboideo-triangularia, eroſa, poſtice integra, *fig.* 7. glauco-viridia, ſubtus præſertim farinâ copioſe adſperſa, ſummis oblongis minus profunde dentatis, aut etiam integris.

RACEMI axillares, erecti, ſpicati, floribus glomeratim diſpoſitis.

CALYX PERIANTHIUM pentaphyllum, perſiſtens, foliolis ovatis, concavis, margine membranaceis, pulverulentis *fig.* 1. poſtice viſum. auct.

COROLLA nulla.

STAMINA: FILAMENTA quinque, ſubulata, alba, calycis foliis oppoſita et paulo longiora; ANTHERÆ ſubrotundæ, didymæ, flavæ. *fig.* 2.

PISTILLUM: GERMEN orbiculatum; *fig.* 3; STYLUS brevis, bipartitus; STIGMATA obtuſa. *fig.* 4.

SEMEN unicum, lenticulare, læve, caſtancum. *fig.* 6.

ROOT annual, fibrous and white.

STALK upright, from one to three feet high, ſlightly crooked, ſomewhat angular and ſtriated, ſolid, branched, ſmooth, ſometimes of a purpliſh colour. BRANCHES alternate.

LEAVES of a triangular rhomboid figure, deeply and irregularly indented, intire behind, *fig.* 7. of a blueiſh green colour, plentifully covered particularly on the under ſide with a mealy powder, the uppermoſt leaves oblong, leſs deeply indented or even entire.

RACEMI axillary, upright, forming a ſpike of flowers growing in little balls or cluſters.

CALYX: a PERIANTHIUM of five leaves: and continuing, the ſegments oval, hollow, membranous at the edges and powdery *fig.* 1. ſeen on the back part, and magnified.

COROLLA wanting.

STAMINA: five white tapering FILAMENTS oppoſite to and a little longer than the leaves of the Calyx; ANTHERA compoſed of two roundiſh yellow cells. *fig.* 2.

PISTILLUM: GERMEN orbicular; *fig.* 3; STYLE ſhort, divided in two; STIGMATA obtuſe. *fig.* 4.

SEED one, lens-ſhaped, ſmooth and of a cheſnut colour. *fig.* 6.

If any plants ſtand in need of figures to illuſtrate them, rather than deſcriptions, it is ſurely the different ſpecies of *Chenopodium* and *Atriplex*.

By figuring the outline of the leaf of any of theſe plants, we convey to the moſt tranſient obſerver, a perfect idea of its ſhape, without that ambiguity which muſt ever attend the deſcription of leaves ſo irregularly formed, ſo variable, and ſo difficult of definition.

Beſides figures, theſe plants ſeem alſo to require every other kind of elucidation; and if the altering and fixing diſtinct engliſh names to different Genera, be in any caſe juſtifiable, it muſt be here, where three different Genera are called indiſcriminately by the names of *Orach*, *Gooſefoot*, and *Blite*. I have therefore preſumed to call the Genus CHENOPODIUM *Gooſefoot*, and propoſe confining the term *Orach* to ATRIPLEX, and *Amaranth* to AMARANTHUS; the term *Blite*, by which a ſpecies of the laſt mentioned Genus has been called, ſeems moſt applicable to the genus BLITUM.

The *Chnopodium album* is the moſt common with us of the whole genus; it occurs in every Garden, flouriſhes on every Dunghill, and abounds in moſt of our Corn-fields. To the Gardener it is a quick growing troubleſome Weed; to the Farmer it is an injurious one, and generally introduced into his fields by that ſlovenly practice of ſuffering every kind of weed to ſeed on his Dung-heap.

Like the other ſpecies of this Genus, it varies exceedingly in its appearance when young, and when in its ſeeding ſtate. Indeed all theſe plants require that the ſtudent ſhould notice them from the earlieſt to the lateſt periods of their growth; or he never can attain a perfect knowledge of them.

It is whiter in its whole appearance than moſt of the *Chenopodiums*; the leaves being more generally covered with thoſe pellucid particles reſembling meal, which are characteriſtic of theſe Genera.

Mr. LIGHTFOOT noticed its being eaten as a Pot-herb in ſome parts of *Scotland*.

CHENOPODIUM VIRIDE. PURPLE-JOINTED GOOSEFOOT.

CHENOPODIUM. *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO, SEU STAMINEO, VEL APETALO POTIUS.

CHENOPODIUM *viride* foliis rhomboideis dentato-ſinuatis, racemis ramoſis ſubfoliatis. *Linnæi Syſt. Vegetab. p.* 216. *Sp. Pl.* 319. *Flora Suecic. p.* 79.

CHENOPODIUM foliis rhomboideis, dentatis, ſubtus incanis. *Haller. hiſt. helv. p.* 267. *n.* 1580.

CHENOPODIUM *viride. Scopoli Fl. Carniol. n.* 280.

Hudſon Fl. Angl. p. 91.

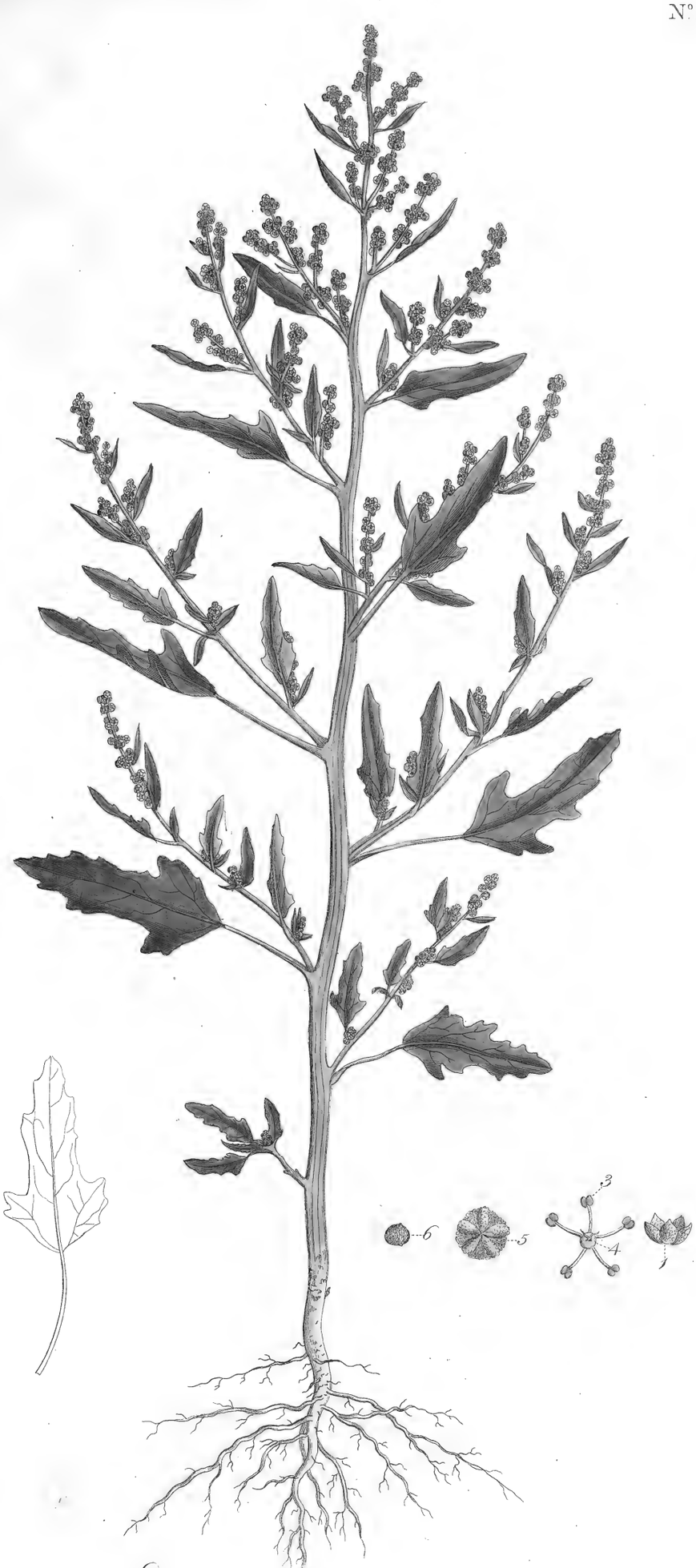
Lightfoot Flora Scot. p. 149. *n.* 6.

I have been cautious in referring to the ſynonyma of authors on this plant, ſeeing they differ ſo much in their opinions reſpecting it; and have rather wiſhed that the plate here given, might ſerve as a reconciliatory reference. LINNÆUS and HALLER both ſeem to doubt its being a ſpecies diſtinct from the *album*, and it muſt be confeſſed there is a great ſimilarity betwixt them; yet if my obſervations are juſt, there is every reaſon to conſider them as two plants perfectly diſtinct.

They agree in this, that they are both annual plants, both grow in the ſame ſoil and ſituations, are nearly alike in their ſize and habit, and both flower about the ſame time; and yet they differ in many reſpects very eſſentially. That which in a more ſtriking manner diſtinguiſhes the *viride* from the *album*, is the greener appearance of the whole plant, the bright red colour at the angles of the joints, which is conſtant, and the ſhape of the leaf, *fig.* 1, which is always much longer than that of the *album*. The *album* is loaded with an appearance of meal, which gives it its white colour; the *viride*, though not deſtitute of it, has it not in that profuſion. When the ſeed are ripe, the tops of the ſtalks, in the *viride*, are more apt to hang down; the parts of the fructification, *fig.* 1, 3, 4, 5, are very ſimilar, but ſmaller; and the calyx is not quite ſo much covered with little globules: the ſeeds of each differs very conſiderably, and affords a very curious and ſatisfactory diſtinction: in the *album* it is perfectly ſmooth, *glaber*; in the *viride* it is ſmaller, and reticulated with impreſſed dots, *reticulatus punctis impreſſis*, *fig.* 6.

Like ſome of the other ſpecies of this Genus it is eaten as a pot-herb.

N°. 103



Chenopodium viride

CHENOPODIUM POLYSPERMUM. ALL-SEED.

CHENOPODIUM *Linnæi Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5-phyllus, 5-gonus. *Cor.* 0. *Sem.* 1. lenticulare, ſuperum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS.)

CHENOPODIUM *Polyſpermum* foliis integerrimis ovatis, caule erecto, calycibus fructus patulis.

CHENOPODIUM *Polyſpermum* foliis integerrimis ovatis, caule decumbente, cymis dichotomis aphyllis axillaribus. *Lin. Syſt. Vegetab. p.* 216. *Spec. Plant. p.* 231. *Fl. Suecic. p.* 80.

CHENOPODIUM caule erecto, foliis ovatis integris. *Haller hiſt. helv. p.* 266.

CHENOPODIUM *Polyſpermum. Scopoli Fl. Carniol. n.* 279.

BLITUM polyſpermon a ſeminis copia. *Bauhin pin.* 118.
Gerard emac. 325.
Parkinſon 753.

CHENOPODIUM Betæ folio. *Inſt. R. H.* 506.
Raii Syn. p. 157. Upright Blite, or All-ſeed.
Lightfoot Fl. Scot. p. 150.
Hudſon Fl. Angl. ed. 1. *p.* 92. *ed.* 2. *p.* 107.

RADIX annua, fibroſa, rubeſcens.

CAULIS plerumque ſuberectus, pedalis aut bipedalis, tetragonus, lævis; RAMI diffuſi, longiſſimi, cauli ſimiles

FOLIA petiolata, ovata, integerrima, lævia, margine veniſque rubro ſæpe tinctis.

FLORES axillares, ſubcymoſi, Cymis dichotomis, aphyllis.

CALYX: PERIANTHIUM pentaphyllum, concavum, perſiſtens, laciniis ovatis, viridibus, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque baſi latiora, alba, demiſſo polline Calyce longiora; ANTHERÆ ſubrotundæ, didymæ, flavæ, *fig.* 2.

PISTILLUM: GERMEN orbiculatum; STYLUS bipartitus, breviſſimus; STIGMATA obtuſa, *fig.* 3, 4.

PERICARPIUM nullum.

SEMEN orbiculatum, rufum, Calyci patulo innixum, non vero incluſum, *fig.* 5.

ROOT annual, fibrous, and reddiſh.

STALK in general nearly upright, about a foot or two in height, four-cornered and ſmooth; BRANCHES far extended, and like the ſtalk.

LEAVES ſtanding on foot-ſtalks, oval, entire at the edges, ſmooth, the margin and veins often tinged with red.

FLOWERS axillary, forming a kind of Cyma, which divides into two at bottom, and is leafleſs.

CALYX: a PERIANTHIUM of five leaves, concave and permanent, the ſegments oval and green, *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS, broadeſt at the baſe, of a white colour; the Pollen being thrown out, they become longer than the Calyx: ANTHERÆ roundiſh, double, and yellow, *fig.* 2.

PISTILLUM: GERMEN orbicular: STYLE divided into two, very ſhort: STIGMATA blunt, *fig.* 3, 4.

SEED-VESSEL wanting.

SEED orbicular, reddiſh brown, ſupported by the Calyx, which ſpreads open, and does not cover it, *fig.* 5.

ALTHOUGH there are many of the *Chenopodiums* which are not to be diſtinguiſhed without much care and attention, yet ſome are very eaſily made out, of which number is the preſent ſpecies.

Its ſquare ſtalk, which is generally of a bright red colour, its long extended branches, and its reddiſh ſeeds, which are numerous and ſtrikingly viſible, from being only in part covered with the calyx, render this plant ſufficiently obvious.

It is not uncommon in gardens and on dunghills, flowers in July and Auguſt. To the gardener it is a troubleſome annual, but ſcarcely injurious to the farmer.

Fiſh are ſaid to be fond of it, *Lin. Fl. Suecic. ex Loes,* when thrown into fiſh ponds.

Chenopodium polyspermum

Hyacinthus non scriptus

Sansom Sculp

HYACINTHUS NON SCRIPTUS. ENGLISH HYACINTH.

HYACINTHUS *Linnæi Gen. Pl.* HEXANDRIA MONOGYNIA.

Cor. campanulata: pori 3 melliferi *germinis.*

Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.

HYACINTHUS *non ſcriptus* corollis campanulatis, ſexpartitis, apice revolutis. *Lin. Syſt. Veget. p.* 276.

HYACINTHUS oblongo flore cœruleus major. *Bauhin Pin.* 43.

HYACINTHUS anglicus. *Gerard. emac.* 111.

HYACINTHUS anglicus belgicus vel hiſpanicus. *Parkinſon. Parad.* 122. *Raii Syn. p.* 373, Engliſh Hyacinth, or Hare-bells.

HYACINTHUS *non ſcriptus*, Hyacinth. *Dioſcoridis. Dod. Ludg. Hudſon. Fl. Angl.* 123. *ed.* 2. *p.* 141. *Lightfoot. Fl. Scot. p.* 183.

RADIX: bulbus ſubrotundus, magnitudine nucis myriſticæ, candidus, ſucco viſcido repletus, ex ima parte plurimas fibrillas albidas dimittens.

ROOT a roundiſh bulb, the ſize of a nutmeg, of a white colour, and full of a viſcid juice, ſending down from the bottom numerous whitiſh fibres.

SCAPUS nudus, ſemipedalis aut pedalis, erectus, teres, lævis, ſolidus.

STALK naked, from half a foot to a foot in height, upright, round, ſmooth, and ſolid.

FOLIA quatuor, ſex, interdum plura, ſcapo duplo breviora, ſemunciam lata, carinata, concava, lævia, nitida.

LEAVES four, ſix, ſometimes more, twice as ſhort as the ſtalk, about half an inch broad, keeled, hollow, ſmooth, and ſhining.

FLORES octo ad duodecem; ſæpe plures, odorati, cœrulei aut violacei, rarius carnei aut albi, ſpicati, ſecundi, nutantes.

FLOWERS from eight to twelve, often more, ſweet ſmelling, of a blue or violet colour, ſeldom fleſh coloured or white, growing in a ſpike, all one way, and hanging down.

BRACTEÆ binæ, ſuberectæ, lanceolatæ, *fig.* 1.

FLORAL-LEAVES two to each flower, lanceolate, and nearly upright, *fig.* 1.

COROLLA ſubcylindracea, ſexpartita, laciniis revolutis, *fig.* 2, 3.

COROLLA almoſt cylindrical, divided into ſix ſegments, the tips of which turn back, *fig.* 2, 3.

STAMINA: FILAMENTA ſex, tria longiora tubum corollæ æquantia, inferne corollæ adnata, ſuperne libera, ſetacea, albida: ANTHERÆ erectæ, incumbentes, ſubſagittatæ, flaveſcentes, *fig.* 4.

STAMINA: ſix FILAMENTS, the three longeſt of which equal the tube of the corolla, below attached to the corolla, above free from it, tapering, and whitiſh: ANTHERÆ upright, incumbent, ſomewhat arrow-ſhaped, of a yellowiſh colour, *fig.* 4.

PISTILLUM: GERMEN conicum, angulato-ſulcatum, albidum: STYLUS corollâ brevior, apice violaceus: STIGMA obtuſum, villoſum, *fig.* 5.

PISTILLUM: GERMEN conical, angular and grooved, of a whitiſh colour: STYLE ſhorter than the corolla, at top of a blueiſh colour: STIGMA blunt and villous, *fig.* 5.

PERICARPIUM: CAPSULA triquetra, trilocularis, trivalvis, valvis ovatis, mucronatis, *fig.* 6.

SEED-VESSEL: a three-cornered CAPSULE, of three cavities and three valves, the valves oval, and terminating in a ſhort point, *fig.* 6.

SEMINA plurima, violacea, nitida, ſubrotunda, *fig.* 7.

SEEDS numerous, of a fine blue colour, and roundiſh ſhape, with a poliſhed ſurface, *fig.* 7.

THE *Hyacinth* is conſidered by the Dutch Floriſts, as the firſt of flowers, and as ſuch ranks in their catalogues; in one of which, viz. that of Meſſrs. VOORHELM and SCHNEEVOGT, of *Haerlem*, for the year 1778, the *Gloria Solis* is marked at a 1000 guilders, eleven of which make one pound ſterling.

The ſpecies which is the object of ſo much care and cultivation, and from whence ſuch numerous and beautiful varieties are produced, is not our Engliſh Hyacinth, but the *Hyacinthus orientalis* of LINNÆUS: nevertheleſs, the preſent ſpecies is often to be met with in gardens, though in a ſtate not much improved, being generally ſingle, and retaining its character of drooping flowers, by which character it is obviouſly diſtinguiſhed from a plant very ſimilar to it, which is much more common in gardens, and flowers at the ſame time; a plant overlooked by LINNÆUS; but named by Mr. BANKS *Scilla campanulata.*

Our meadows, woods, and hedge-rows, are beautifully decorated with the bloſſoms of this plant in the ſpring months. Its ſeeds are not ripened till the end of the year; and thoſe, on being ſown, did not vegetate till the ſecond year.

The term of *non ſcriptus* was applied to this plant by ſome of the earlieſt botaniſts, as may be ſeen in *Bauhin's Pinax*, and *Ray's Hiſt. Plant.* and implies, that the flowers were not marked with any kind of character, which the Hyacinth of the antients is ſuppoſed to have been, *vid. Bauh. Pin. p.* 47. and *Raii. Hiſt. p.* 1155.

The great uncertainty in which the antients have left us, by their vague and imperfect deſcriptions, appears in a ſtrong light, by what can be collected from their writings concerning the HYACINTH FLOWER. Since the revival of letters, commentators and botaniſts, have taken great pains to aſcertain the plant which the antient poets and naturaliſts called by this name; but with what ſucceſs, may be eaſily gathered, when we find them ſeverally fixing upon flowers of ſuch very different appearances as the Martagon, Larkſpur, and Iris, for the true Hyacinth.

The *Hyacinthine hair* of the antients, has alſo engaged the attention of the inquiſitive, ſucceeding poets copying the expreſſion from HOMER, who deſcribes *Ulyſſes* thus, in POPE or BROOME's tranſlation:

" *Back from his brows a length of hair unfurls,*
" *His* hyacinthine locks *deſcend in wavy curls.*
" *As by ſome artiſt, to whom Vulcan gives*
" *His ſkill divine, a breathing ſtatue lives;*
" *By Pallas taught, he frames the wond'rous mould,*
" *And o'er the ſilver pours the fuſile gold;*
" *So Pallas his heroic frame improves*
" *With heav'nly bloom, and like a god he moves.*"

This paſſage is thus imitated by MILTON, in his deſcription of the perſon of *Adam.*

——" *His fair large front and eye ſublime declar'd*
" *Abſolute rule; and* hyacinthine locks
" *Round from his parted forelock manly hung*
" *Cluſtring, but not beneath his ſhoulders broad.*"

It is ſurpriſing that all the commentators ſhould agree, in ſuppoſing HOMER means *black hair* by his alluſion to the *Hyacinth*, when he elſewhere in the Odyſſey, deſcribes *Ulyſſes* with *yellow* or *golden hair*: " Ανθας δ' εκ κεφαλης ολεσω τριχας," which correſponds with the ſimile in the above mentioned quotation, where the poet compares the hair flowing on his hero's ſhoulders, to *gold* inlaid on *ſilver*. But perhaps HOMER did not intend to expreſs any colour by alluding to the *Hyacinth*: this line in the original, " Ουλας ηκε κομας υακινθινο ανθει ομοιας," may be literally tranſlated thus:

" *She let down his hair curled like a Hyacinth flower.*"

The *Hyacinthus comoſus*, and its variety the *Hyacinthus monſtroſus*, or *feathered Hyacinth*, bear a ſtrong reſemblance to *curled hair*, and are natives of the warmer parts of Europe.

A deſire to point out the connection between botany and polite literature, has occaſionally induced us to venture on hints and remarks of this kind, which the learned reader will, we hope, look on with an indulgent eye, and remember that our attempts, ſuch as they are, add little to the bulk, and nothing to the expence, of the work.

JUNCUS CAMPESTRIS. HAIRY FIELD RUSH.

JUNCUS *Linnæi Gen. Pl.* HEXANDRIA MONOGYNIA.

Cal. 6-phyllus. *Cor.* 0. *Capſula* 1-locularis.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

JUNCUS *campeſtris* foliis planis ſubpiloſis, ſpicis ſeſſilibus pedunculatiſque. *Lin. Syſt. Vegetab. p.* 280. *Sp. Pl. p.* 468.

JUNCUS planifolius; ſpicis petiolatis, nutantibus; petalis ariſtatis. *Haller. hiſt.*

JUNCUS *campeſtris. Scopoli Fl. Carniol. p.* 258.

GRAMEN hirſutum capitulis Pſyllii. *Bauhin. Pin.* 7.

GRAMEN exile hirſutum. *Gerard. emac.* 17.

GRAMEN nemoroſum hirſutum minus anguſtifolium. *Parkinſon.* 1185.
Raii Syn. p. 416, Small Hairy Wood-Graſs.
Hudſon. Fl. Angl. 132, *ed.* 2. *p.* 152.
Lightfoot Fl. Scot. 186.

RADIX perennis, craſſitie pennæ coracis, ſublignoſa, fibris plurimis nigricantibus inſtructa, repens.

CULMUS ſimplex, palmaris, aut dodrantalis, erectus, folioſus, baſi tumidus, teres, lævis, enodis.

FOLIA plana, piloſa, pilis e margine foliorum erumpentibus, acuta, apicibus ſæpe rufis, membrana deſtituta, foliola duo erecta inæqualia ſpiculis ſubjecta culmum terminant.

SPICULÆ plerumque tres, ſubovatæ, *fig.* 1. floreſcente plantâ erecta, pedicellis inæqualibus inſidentes, inferiore ſubſeſſili.

PEDUNCULI filiformes, e vaginâ ciliatâ prodeuntes.

FLORES decem aut duodecem circiter in ſingula ſpicula, ſeſſiles.

CALYX: ſquamulæ plerumque quatuor, ovato-acutæ, membranaceæ, inæquales, foliolis calycinis multo breviores, ſingulum floſculum ambiunt, *fig.* 2.

CALYX proprius, hexaphyllus: foliolis lanceolato-acuminatis, patentibus, perſiſtentibus, nitidis, carinatis, e fuſco-purpureis, *fig.* 3.

COROLLA nulla.

STAMINA: FILAMENTA ſex, ſubulata, breviſſima: ANTHERÆ oblongæ, calycem æquantes, flavæ, quadriſulcatæ, bicuſpidatæ, *fig.* 4, 5, demiſſo polline tortuoſæ.

PISTILLUM: GERMEN viride, triquetrum, acuminatum: STYLUS brevis, filiformis: STIGMATA tria, longa, filiformia, flexuoſa, villoſa, *fig.* 6.

PERICARPIUM: CAPSULA tecta, triquetra, unilocularis, trivalvis, *fig.* 7, 8, 9.

SEMINA plerumque tria, ſubrotunda, olivacea, *fig.* 10, 11.

ROOT perennial, the ſize of a crow quill, ſomewhat woody, furniſhed with numerous blackiſh fibres, creeping.

STALK ſimple, from three to nine inches high, upright, leafy, ſomewhat enlarged at bottom, round, ſmooth, and without joints.

LEAVES flat, hairy, the hairs proceeding from the edges of the leaves, pointed, the tips often of a reddiſh brown colour, not furniſhed with any membrane: two ſmall, upright, unequal leaves, placed under the ſpiculæ, terminate the ſtalk.

SPICULÆ, generally three, ſomewhat oval, *fig.* 1, upright when the plant is in flower, ſitting on uneven foot-ſtalks, the lowermoſt ſpicula nearly ſeſſile.

FLOWER-STALKS thread-ſhaped, proceeding from a ſmall ſheath edged with hairs.

FLOWERS about ten or twelve in each ſpicula, ſeſſile.

CALYX: moſt commonly four ſmall ſcales, of an oval pointed ſhape, membranous and uneven, and much ſhorter than the leaves of the true Calyx, ſurround the baſe of each floret, *fig.* 2.

CALYX: the proper Calyx is compoſed of ſix leaves, ſpear-ſhaped, with a long point, ſpreading, permanent, ſhining, keeled, of a browniſh purple colour, *fig.* 3.

COROLLA wanting.

STAMINA: ſix FILAMENTS, tapering, and very ſhort: ANTHERÆ oblong, the length of the Calyx, yellow, with four grooves, terminating in two points, *fig.* 4, 5; on ſhedding the Pollen becoming twiſted.

PISTILLUM: GERMEN green, three-cornered, pointed: STYLE ſhort, thread-ſhaped: STIGMATA three, long, thread-ſhaped, crooked, and villous, *fig.* 6.

SEED-VESSEL: a CAPSULE covered by the Calyx, three-cornered, of one cavity and three valves, *fig.* 7, 8, 9.

SEEDS uſually three, of a roundiſh ſhape, and olive colour, *fig.* 10, 11.

THE above deſcription is taken from the *Juncus campeſtris* when growing in its moſt uſual ſtate in dry paſtures; in ſuch ſituations it has ſeldom more than three or four ſpiculæ; in moiſter and richer ſoils, particularly on boggy ground, it will often have a much greater number: but though it varies in ſize and the number of its parts, it ſtill continues very diſtinct from the *piloſus*, or *Hairy Wood Ruſh.*

It flowers in April and May, and ripens its ſeeds in June.

The hairs of this, and ſome of the other Junci, are of a very ſingular kind; a ſtranger to plants, would ſuppoſe that ſome animal had been robbed of its hair by rubbing on it.

The appearance of this plant indicates a dry, and conſequently not very luxuriant paſturage.

Juncus campestris

Swinson, sculp.

RUMEX CRISPUS. CURLED DOCK.

RUMEX *Linnæi Gen. Pl.* HEXANDRIA TRIGYNIA.

Cal. 3-phyllus. *Petala* 3-conniventia. *Sem.* 1, triquetrum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

RUMEX *criſpus* floribus hermaphroditis: valvulis integris graniferis, foliis lanceolatis undulatis acutis.

Linn. Syſt. Vegetab. p. 284. *Spec. Plant. p.* 478. *Fl. Suecic. p.* 117.

LAPATHUM foliis criſpis, imis ovatis, ſupremis lanceolatis, calycibus verrucoſis. *Haller hiſt. n.* 1589.

LAPATHUM *criſpum. Scopoli Fl. Carniol. p.* 261.

LAPATHUM folio acuto criſpo. *Bauhin. Pin.* 115.

LAPATHUM acuti varietas folio criſpo. *Ger. emac.* 387.

LAPATHUM acutum minus. *Parkinſon.* 226.

Raii Syn. p 141. Sharp-pointed Dock with curled leaves.

Hudſon Fl. Angl. p. 134.

Lightfoot Fl. Scot. 108.

RADIX perennis, flaveſcens, fuſiformis, per ætatem ſuperne ramoſus evadit.

ROOT perennial, tapering, of a yellowiſh colour, becoming branched at top as it grows old.

CAULIS bipedalis aut tripedalis, erectus, ſtriatus, lævis, ramoſus.

STALK two or three feet high, upright, finely grooved, ſmooth, and branched.

FOLIA lanceolata, undulata, acuta, ſubtus venoſa, petiolis ſulcatis.

LEAVES lanceolate, waved, pointed, underneath veiny, the foot-ſtalks grooved.

FLORES in ſpicas denſiſſime glomerati, caulem penitus fere occultantes.

FLOWERS crouded very thickly together in ſpikes, and almoſt entirely hiding the ſtalk.

CALYX: PERIANTHIUM triphyllum, foliolis cymbiformibus, corollâ brevioribus, *fig.* 1.

CALYX: a PERIANTHIUM of three leaves, which are boat-ſhaped, and ſhorter than the Corolla, *fig.* 1.

COROLLA: PETALA tria, ovata, concava, demum conniventia, magna, granifera, venoſa, reticulata, integra, SEMEN unicum, triquetrum, nitidum, pallide fuſcum foventia, *fig.* 3, 7, 8, 9.

COROLLA: three oval, hollow PETALS, finally becoming cloſed, and large; each bearing a grain, veiny, reticulated, entire at the edges, including a three-cornered, ſhining, pale brown SEED, 3, 7, 8, 9.

STAMINA: FILAMENTA tria, capillaria, brevia: ANTHERÆ flavæ, *fig.* 3.

STAMINA: three very fine ſhort FILAMENTS: ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN triquetrum: STYLI tres, reflexi: STIGMATA laciniata, *fig.* 4, 5, 6.

PISTILLUM: GERMEN three-corner'd: STYLES three, turning back: STIGMATA jagged, *fig.* 4, 5, 6.

THE *Docks*, like the ſeveral ſpecies of *Gooſefoot* and *Orach*, are with difficulty diſtinguiſhed from each other.

The ſpecies here figured, is one of the moſt common, as well as the moſt injurious as a weed. It is found in almoſt every kind of ſoil and ſituation; as in wet meadows, by the ſides of roads, and in cultivated ground, into which it is generally introduced with dung. I have remarked ſome Clover fields in which this plant formed nearly one half of the crop.

It may be diſtinguiſhed from the other *Docks* by its *yellow root*, *waved leaves*, and large and numerous ſeed-coverings, which grow ſo thick as almoſt to hide the ſtalk, and which are larger than in moſt of the other *Docks*, of a roundiſh ſhape, with prominent veins, and an entire or ſlightly waved edge.

It flowers in June, July, and Auguſt.

Rumex crispus

Sansom Sculp

Epilobium hirsutum

Sansom Sculp

EPILOBIUM HIRSUTUM. LARGE-FLOWER'D WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *hirſutum* foliis ovato-lanceolatis, ſemiamplexicaulibus, hirſutis; caule ramoſiſſimo; radice repente.

EPILOBIUM *hirſutum* foliis oppoſitis lanceolatis ſerratis decurrenti amplexicaulibus. *Lin. Syſt. Vegetab. p.* 471. *Spec. Plant. p.* 494. *Flor. Suecic. p.* 123.

EPILOBIUM foliis ſemiamplexicaulibus, lanceolatis, hirſutis. *Haller. hiſt. helv. p.* 125.

CHAMÆNERION *hirſutum. Scopoli Fl. Carniol.* 270.

LYSIMACHIA ſiliquoſa hirſuta magno flore. *Bauhin. pin.* 245.

LYSIMACHIA ſiliquoſa. *Ger. emac.* 476.

Raii Syn. p. 311. Great hairy codded Looſeſtrife or Willow-herb, called alſo Codlings and Cream.

Hudſon. Fl. Angl. p. 141. 3. *ed.* 2. *p.* 162. 3.

Lightfoot. Fl. Scot. p. 197.

Oeder. Fl. Dan. ic. 326.

RADIX perennis, ſurculoſa, fibris capillata, e cujus capite erumpunt germina majuſcula, rubentia, in ſummâ tellure reptantia, quibus ſe late diffundit et propagat.

CAULIS tripedalis ad orgyalem, erectus, ramoſiſſimus, teres, ad baſin ſubtetragonus, hirſutus, purpuraſcens; RAMI cauli ſimiles, adſcendentes.

FOLIA ovato-lanceolata, argute denticulata, hirſuta, ſemiamplexicaulia, venoſa, ramorum ſubtortuoſa.

FLORES magni, ſpecioſi, purpurei, ſubcampanulati, paululum nutantes.

CALYX: PERIANTHIUM ſuperum, erectum, quadripartitum, baſi anguloſum, laciniis ovato-acutis, fundo villoſo, *fig.* 1.

COROLLA: PETALA quatuor, obcordata, emarginata, purpurea, baſi albida, calyce duplo longiora, *fig.* 2.

STAMINA: FILAMENTA octo, quorum quatuor longiora, alba, ſubulata: ANTHERÆ oblongæ, biloculares, flaveſcentes, *fig.* 3.

PISTILLUM: GERMEN oblongum, villoſum, inferum, tetragono-ſulcatum, glandulis minimis coronatum: STYLUS filiformis, declinatus, Staminibus longior: STIGMA craſſum, quadrifidum, laciniis revolutis, villoſis, *fig.* 4, 5, 6.

PERICARPIUM: CAPSULA triuncialis, obtuſe tetragona, ſulcata, ut in germine glandulis terminata, leniter hirſuta, quadrilocularis, quadrivalvis.

SEMINA ovata, pallide fuſca, plurima, pappoſa, lente viſa hinc convexa, ſcabriuſcula, illinc compreſſo-ſulcata, RECEPTACULO tetragono, libero, flexili ſeriatim affixa, *fig.* 7.

ROOT perennial, full of ſhoots, with numerous fibres, ſending off from the upper part ſtoles of a conſiderable thickneſs, which creeping under the ſurface of the ground, ſpread widely and propagate the plant.

STALK from three to ſix feet high, upright, very much branched, round, ſomewhat quadrangular at bottom, hirſute, and purpliſh: BRANCHES like the ſtalk, nearly upright.

LEAVES betwixt oval and lanceolate, finely toothed at the edges, hirſute, half embracing the ſtalk, veiny, thoſe on the branches a little twiſted.

FLOWERS large, ſhowy, of a purple colour, ſomewhat bell-ſhaped, and hanging down a little.

CALYX: a PERIANTHIUM placed above the Germen, upright, angular at the baſe, deeply divided into four ſegments, which are oval and pointed, the bottom in the inſide villous, *fig.* 1.

COROLLA: four PETALS inverſely heart-ſhaped, emarginated, of a purple colour with a white baſe, and twice the length of the Calyx, *fig.* 2.

STAMINA: eight FILAMENTS, four of which are ſhorter than the others, white and tapering: ANTHERÆ oblong, bilocular, and yellowiſh, *fig.* 3.

PISTILLUM: GERMEN oblong, villous, placed below the Calyx, four-corner'd and grooved, crowned with very minute glands: STYLE filiform, hanging down, and longer than the Stamina: STIGMA thick, divided into four ſegments, which are villous and roll'd back, *fig.* 4, 5, 6.

SEED-VESSEL, a CAPSULE about three inches long, obtuſely four cornered, and grooved, terminated as in the Germen with glands, ſlightly hirſute, having four cavities and four valves.

SEEDS oval, pale brown, numerous, downy, viewed with a magnifier on one ſide convex, and roughiſh, on the other, flattiſh and grooved, affixed in rows to a four-cornered, looſe, flexible RECEPTACLE, *fig.* 7.

THE *Lyſimachia ſiliquoſa hirſuta magno flore*, and the *Lyſimachia hirſuta parvo flore* of BAUHINE, are conſidered by LINNÆUS as the ſame ſpecies.

Mr. RAY, both in his *Hiſtoria Plantarum* and *Synopſis*, conſiders them as diſtinct ſpecies; and Mr. HUDSON, viewing them in the ſame light, gives a new name to the larger flowering one, calling it *ramoſum*, and retains the name of *hirſutum* for the ſmaller flowering one: but as the larger flowering plant is the ſpecies which LINNÆUS has diſtinguiſhed by the name of *hirſutum*, there appears more propriety in adopting his name for the ſpecies, and giving a new name to what he conſiders as the variety.

The ſpecies here figured, grows very commonly in and by the ſides of wet ditches, ponds, &c. riſing generally to the height of five feet.

It flowers in July and Auguſt.

A variety with a white flower ſometimes occurs; and a ſort with variegated leaves, is ſold by the gardeners.

Having a creeping root, it is very apt to increaſe too much if not properly attended to. The leaves, when young, have a ſhining appearance; and if bruiſed, ſend forth an agreeable ſmell, whence its name of *Codlings and Cream.*

Is it not a plant deſerving the notice of the Farmer? If cattle are found to eat it, either green or dryed, may it not be cultivated to advantage it wet ſituations, where other uſeful plants will not grow?

EPILOBIUM VILLOSUM. HOARY WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 21. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *villoſum* foliis oblongo-lanceolatis, dentatis, pubeſcentibus, caule tereti villoſo.

EPILOBIUM *hirſutum* foliis lanceolatis ſerratis ſubdecurrentibus; inferioribus oppoſitis, caule ſubſimplici. *Hudſon Fl. Angl. ed.* 2. *p.* 162.

LYSIMACHIA filiquoſa hirſuta parvo flore. *C. Bauhin. pin.* 245. *Prod.* 116.

LYSIMACHIA filiquoſa hirſuta flore minore. *I. B. II.* 906.

LYSIMACHIA filiquoſa ſylveſtris hirſuta. *Parkinſon?* *Raii Hiſt. Pl. p.* 861. *Syn. ed.* 3. *p* 311.

The leſſer hairy codded Looſeſtrife or Willow-herb, with ſmall flowers.

Lightfoot. Fl. Scot. p. 198. var. hirſut.

RADIX perennis, fibroſa.

CAULIS pedalis ad tripedalem, ſimplex, aut ramoſus pro loco natali, teres, *villoſus.*

FOLIA oblongo-lanceolata, connata, non vero decurrentia, rare dentata, dentibus glanduloſis, mollia, pubeſcentia, ſubtus albida, patentia, in locis ſiccioribus ſæpe erecta.

FLORES parvi, purpurei.

CALYX: PERIANTHIUM tetraphyllum, ſuperum, foliolis ovato-lanceolatis, hirſutulis, *fig.* 1.

COROLLA: PETALA quatuor, obcordata, calyce duplo fere longiora, *fig.* 2.

STAMINA: FILAMENTA octo; ſubulata, alterna breviora: ANTHERÆ ovales, compreſſæ, obtuſæ, *fig.* 3.

PISTILLUM: GERMEN cylindraceum, longiſſimum: STYLUS filiformis: STIGMA craſſum, quadrifidum, laciniis vix vero revolutis, *fig.* 4.

PERICARPIUM: CAPSULA prælonga, rubeſcens.

SEMINA plurima, pappo coronata.

ROOT perennial and fibrous.

STALK from one to three feet high, ſimple or branched according to its place of growth, round, *hoary*, and purpliſh.

LEAVES oblong and lanceolate, uniting at bottom around the ſtalk, but not running down it, teeth at the edge few and glandular, ſoft, downy, underneath whitiſh, ſpreading, but in more dry ſituations frequently upright.

FLOWERS ſmall and purple.

CALYX: a PERIANTHIUM of four leaves, placed above the Germen, oval, pointed, and ſlightly hirſute, *fig.* 1.

COROLLA: four PETALS inverſely heart-ſhaped, almoſt twice the length of the Calyx, *fig.* 2.

STAMINA: eight FILAMENTS, tapering, the four alternate ones ſhorteſt: ANTHERÆ oval, flattened, and obtuſe, *fig.* 3.

PISTILLUM: GERMEN cylindrical, very long: STYLE filiform: STIGMA thick, divided into four ſegments, which are ſcarcely rolled back, *fig.* 4.

SEED-VESSEL, a long CAPSULE, of a reddiſh colour.

SEEDS numerous, covered with a pappus or down.

IN three reſpects does this plant particularly, and invariably, differ from the *hirſutum*; of which, as hath before been obſerved, it is conſidered by LINNÆUS and other writers, as a variety only; viz. in its *bloſſoms*, *root*, and *pubeſcence*; either of which would appear alone ſufficient to conſtitute it a diſtinct ſpecies.

The bloſſoms in the firſt place, are not in general more than one third as large; the root does not creep; and the ſtalk and leaves, are covered with numerous ſoft hairs, which give the whole plant a whitiſh or hoary appearance, that is particularly ſtriking.

Beſides theſe characters, the plant is alſo much ſmaller; and in general, is not ſo much branched. I have often gathered ſpecimens of it not more than a foot in height, with a ſimple ſtalk; and have alſo frequently found it much higher, as well as much branched, when there was no reaſon to ſuppoſe the plant had received any injury, which Mr. HUDSON aſſerts is always the caſe, when the plant occurs in the latter ſtate. The Calyx and Stigma, differ alſo very materially in the two plants.

It is very common with us on the banks of rivulets, and in watery places; and flowers in July and Auguſt.

No particular qualities are aſcribed to it.

Epilobium villosum

Epilobium tetragonum. Square-Stalk'd Willow-Herb.

EPILOBIUM *Linnæi. Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *tetragonum* foliis lanceolatis denticulatis; caule tetragono; ſtigmate integerrimo.

EPILOBIUM foliis lanceolatis denticulatis; imis oppoſitis, caule tetragono. *Lin. Syſt. Vegetab. p.* 297. *Sp. Plant.* 495.

EPILOBIUM foliis lanceolatis, glabris, dentatis. *Haller. hiſt. p.* 426. *n.* 997.

CHAMÆNERION *tetragonum. Scopoli. Flor. Carniol. p.* 271. 454.

LYSIMACHIA ſiliquoſa glabra media ſive minor. *Gerard. emac.* 479.

LYSIMACHIA ſiliquoſa glabra minor. *Bauhin. Pin.* 245. *Raii. Syn. p.* 311. 5, Middle ſmooth-leaved codded Willow-herb, or Looſeſtrife.

Hudſon Fl. Angl. ed. 1. *p.* 141. *ed.* 2. *p.* 162.

Lightfoot. Fl. Scot. p. 198.

RADIX perennis, fibroſa, fibris albidis, ſtolonibus quotannis reparata, non vero repens.

CAULIS erectus, ſuperne valde ramoſus, bipedalis, rigidus, inferne purpuraſcens, ſubtetragonus, lævis.

FOLIA ſubdecurrentia, unde caulis anguloſus, inferiora lanceolata, ſuperiora lineari-lanceolata, ſerrata, venoſa, glabra.

FLORES parvi, purpurei.

CALYX: PERIANTHIUM quadripartitum, foliis lanceolato-acuminatis, pubeſcentibus, carinatis, apicibus rufis, *fig.* 1.

COROLLA: PETALA quatuor, purpurea, venis ſaturatioribus ſæpe ſtriata, calyce paulo longiora, emarginata, *fig.* 2.

STAMINA: FILAMENTA octo, quorum quatuor breviora: ANTHERÆ flaveſcentes, *fig.* 3.

PISTILLUM: GERMEN tetragonum, pubeſcens: STYLUS brevis, albus: STIGMA craſſum, album, *integerrimum*, *fig.* 4.

PERICARPIUM: CAPSULA longiſſima, fere triuncialis, pedunculis triplo brevioribus inſidens.

SEMINA plurima, pappoſa.

ROOT perennial, fibrous, the fibres whitiſh, repaired yearly by new ſhoots, but not creeping.

STALK upright, at top much branched, about two feet high, ſtiff, at bottom purpliſh, ſmooth, and ſomewhat ſquare.

LEAVES ſomewhat decurrent, whence the angular appearance of the ſtalk; the lower ones lanceolate; the upper ones narrower, ſerrated, veiny, and ſmooth.

FLOWERS ſmall and purple.

CALYX: a PERIANTHIUM divided into four ſegments, which are narrow and tapering to a point, downy, the midrib projecting on the under ſide, the tips reddiſh, *fig.* 1.

COROLLA: four PETALS, purple, often ſtreaked with veins of a deeper colour, ſomewhat longer than the calyx, with a notch at top, *fig.* 2.

STAMINA: eight FILAMENTS, four long and four ſhort: ANTHERÆ yellowiſh, *fig.* 3.

PISTILLUM: GERMEN ſquare, downy: STYLE ſhort and white: STIGMA thick, white, and *perfectly entire*, *fig.* 4.

SEED-VESSEL a very long CAPSULE, approaching to three inches, ſitting on a flower-ſtalk thrice as ſhort.

SEEDS numerous and downy.

THE preſent ſpecies of *Epilobium*, takes its name of *tetragonum* from the apparent ſquareneſs of its ſtalk, which however is not ſo completely ſquare as that of the *Hypericum quadrangulum*, but aſſumes rather an angular appearance, ariſing as in many other plants, from projecting lines running from the leaves down the ſtalk: this however is one of the moſt ſtriking characters of this ſpecies: to which may be added the narrowneſs of its leaves, the uncommon length of its pods, and its undivided ſtigma.* Theſe are the peculiarities by which this plant may readily be diſtinguiſhed: but too much ſtreſs muſt not be laid on ſome of them.

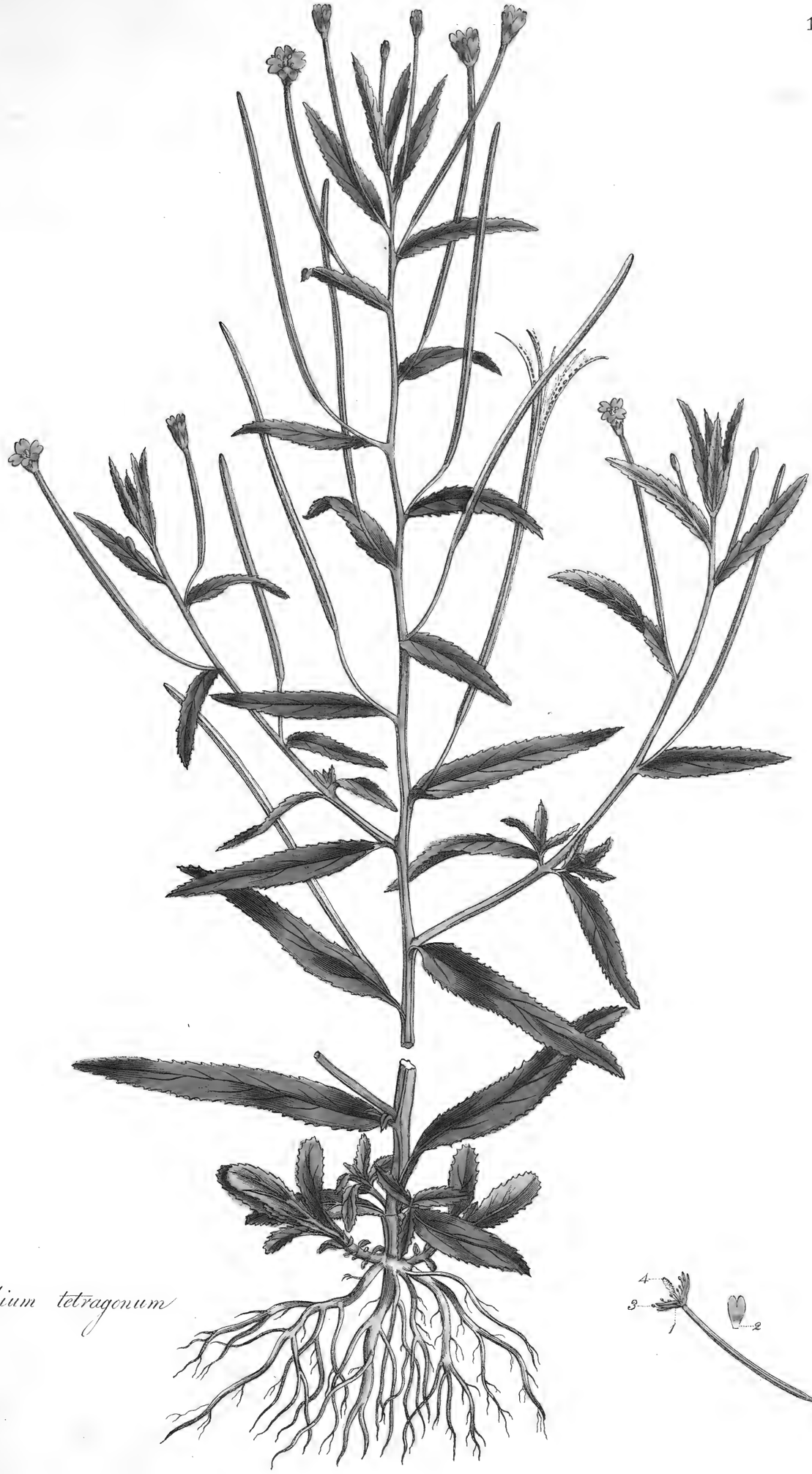
The breadth of a leaf, its being placed on a peduncle, or ſitting cloſe to the ſtalk, are in general conſidered as excellent ſpecific characters; but in this plant, as well as ſome others, we have a proof of their fallibility; the leaves being ſometimes nearly as broad as thoſe of the *montanum*, and placed on foot-ſtalks of a conſiderable length. When I firſt accidently met with this variety, I was led to conclude it to be a diſtinct ſpecies; but a careful attention to it, afterwards convinced me it was only a variety.

The *Epilobium tetragonum* is no uncommon plant with us; but is generally to be met with in watery ditches, by the ſides of roads; and where it does occur, it uſually abounds. Among a variety of other places, I have obſerved it in the Lane leading from *Newington* to *Hornſey Wood*.

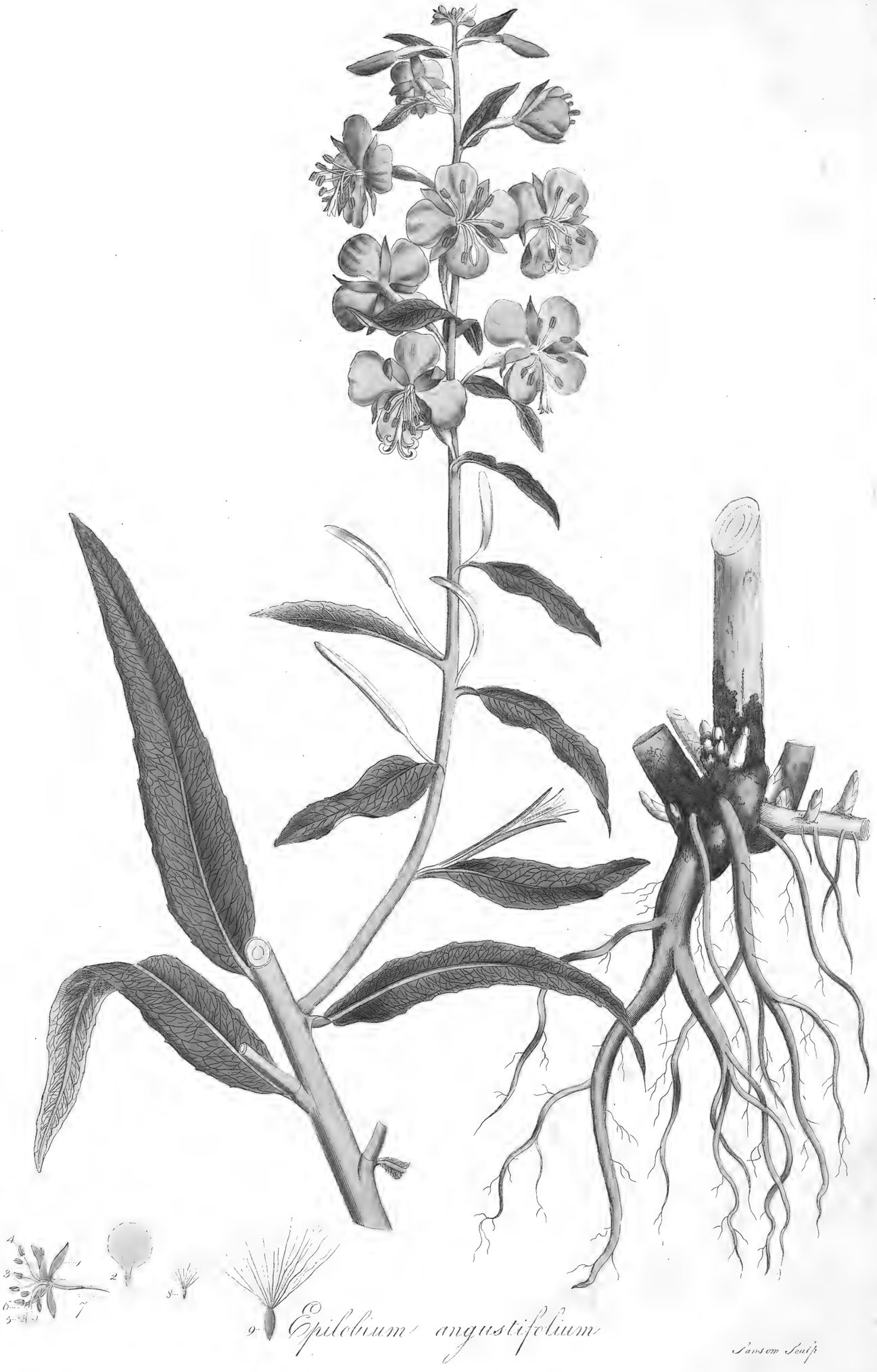
It flowers with the other *Willow-herbs*.

The farmer has no reaſon to complain of it: nor is it celebrated in the annals of phyſic.

*This character ſeems firſt to have been noticed by RAY: his words are *Stylus non ut in præcedente quadrifidus eſt*, Hiſt. Pl. p. 861.



Epilobium tetragonum



Epilobium angustifolium

Sansom Sculp.

EPILOBIUM ANGUSTIFOLIUM. ROSEBAY WILLOW-HERB.

EPILOBIUM *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-fidus. *Petala* 4. *Caps.* oblonga, infera. *Sem.* pappoſa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

EPILOBIUM *anguſtifolium* foliis ſparſis lineari-lanceolatis, floribus inæqualibus. *Linnæi Syſt. Vegetab. p.* 296. *Sp. Pl.* 347.

EPILOBIUM flore difformi, foliis lanceolatis, tranſverſim nervoſis. *Haller hiſt. n.* 427.

CHAMÆNERION *anguſtifolium. Scopoli Fl. Carn.*

LYSIMACHIA ſpecioſa, quibuſdam onagra dicta ſiliquoſa. *Bauhin hiſt. II.* 906.

LYSIMACHIA Chamænerion dicta anguſtifolia. *Bauhin. pin.* 245. *Raii Synop.* 310. Roſebay Willow-herb. *Hudſon Flor. Angl. p.* 140. *Lightfoot Flor. Scot. p.* 197. *Oeder Dan. ic.* 289.

RADIX perennis, repens.
CAULIS erectus, tripedalis, ad orgyalem, ramoſiſſimus, teres, pubeſcens, ramis alterne oppoſitis.

FOLIA lanceolata, alterna, ſubdecurrentia, glabra, margine minute remoteque dentatâ, nervo medio albido.
BRACTEÆ foliis ſimiles.
FLORES purpurei, ſpecioſi, ſubſpicati, raro ultra quatuor aut quinque unà in eâdem ſpicâ florentes.
CALYX: PERIANTHIUM tetraphyllum, ſuperum, foliolis lanceolatis, coloratis, ſurſum curvatis, *fig.* 1.
COROLLA: PETALA quatuor, purpurea, patentia, ſubrotunda, emarginata, unguibus anguſtis, *fig.* 2, duobus inferioribus remotioribus.

STAMINA: FILAMENTA octo, ſubæqualia, purpuraſcentia, primum deflexa, demum ſuberecta, Piſtillo breviora: ANTHERÆ rubræ, biloculares: POLLEN viride, *fig.* 3, 4.

PISTILLUM: GERMEN inferum, oblongum, longitudine Styli, ſubtetragonum, glandula coronatum: STYLUS filiformis, albus, prope baſin villoſus: STIGMA quadrifidum, magnum, laciniis villoſis revolutis, *fig.* 5, 6, 7.

PERICARIUM: CAPSULA cylindracea, incurvata, quadrilocularis, quadrivalvis.

SEMINA numeroſa, ſtriata, pappo coronata Receptaculo longiſſimo tetragono, libero, flexili affixa, *fig.* 8, 9.

ROOT perennial and creeping.
STALK upright, from three to ſix feet high, very much branched, round, and pubeſcent; the branches alternately oppoſite.
LEAVES lanceolate, alternate, running ſlightly down the ſtalk, ſmooth, the edge minutely and rarely indented, the midrib whitiſh.
FLORAL-LEAVES like thoſe on the ſtalk.
FLOWERS purple, ſhowy, growing in a kind of ſpike, ſeldom more than four or five flowering together on the ſame ſpike.
CALYX: PERIANTHIUM of four leaves, placed above the Calyx; the leaves lanceolate, coloured, and bending upwards.
COROLLA: four roundiſh PETALS of a purple colour, ſpreading, the claws narrow, *fig.* 2; the two lowermoſt ſomewhat remote from each other.
STAMINA: eight FILAMENTS, nearly of an equal length, of a purpliſh colour, at firſt bending down, finally becoming ſomewhat upright, ſhorter than the Piſtillum: ANTHERÆ red, having two cavities: the POLLEN green, *fig.* 3, 4.
PISTILLUM: GERMEN below the Calyx, oblong, the length of the Style, ſlightly quadrangular, crowned by a gland: STYLE filiform, white, villous towards the bottom: STIGMA large, divided into four ſegments, which are villous, and turn back, *fig.* 5, 6, 7.
SEED-VESSEL: a CAPSULE of a cylindrical form, ſomewhat incurvated, of four cavities and four valves.
SEEDS numerous, ſtriated, crowned with a down, and affixed to a very long, looſe, flexible Receptacle, *fig.* 8, 9.

IN the third edition of RAY's *Synopſis*, this plant is ſaid to have been found growing wild near *Alton*, in *Hampſhire:* in confirmation of this, I have myſelf found it growing in a wild unfrequented wood near the ſame place.

The ſhowy appearance of its bloſſoms, has long ſince introduced it into our gardens; where, by means of its creeping roots, it is apt to increaſe more than is deſirable: and from the refuſe of gardens, we ſuſpect thoſe plants, which we have here and there noticed about town, have ariſen. Mr. HUDSON, in his *Flora Anglica*, mentions its growing on *Maize Hill*, beyond *Greenwich*.

It continues in bloſſom through July, Auguſt, and September.

HALLER, from ſeveral authors, mentions, that the young ſhoots are eatable, although an infuſion of the plant ſtupifies; that the pith alſo is eatable; which when dried, is boiled, whence it becomes ſweet, and by a proper proceſs, affords good beer; as alſo vinegar: that it is alſo added to the Cow Parſnep, to enrich the ſpirit which is prepared from that plant: that it likewiſe affords good fodder for cattle; and the down of the ſeeds, mixed with beavers hair, has been manufactured into ſeveral articles of cloathing.

It is too diſtinct to be miſtaken for any of the other ſpecies; and is ſometimes found with white flowers.

ERICA CINEREA. FINE LEAVED HEATH.

ERICA *Linnæi Gen. Pl.* OCTANDRIA MONOGYNIA.

Cal. 4-phyllus. *Cor.* 4-fida. *Filamenta* receptaculo inſerta. *Antheræ* bifidæ.

Caps. 4-locularis.

Raii Syn. ARBORES ET FRUTICES.

ERICA *cinerea* foliis ternis glabris linearibus.

ERICA *cinerea* Antheris criſtatis, Corollis ovatis, Stylo ſubexerto, foliis ternis, Stigmate capitato. *Linnæi Syſt. Vegetab. p.* 303.

ERICA humilis, cortice cinereo Arbuti flore. *Bauhin p.* 486.

ERICA virgata ſive *VI* Cluſii. *Parkinſon* 1483.

ERICA tenuifolia *Gerard emac.* 1380. *Raii Syn. p.* 471, Fine leaved Heath. *Hudſon Fl. Angl. p.* 144. *Oeder Dan. icon.* 38.

RADIX perennis, lignoſa.

CAULES ſuffruticoſi, pedales, lignoſi, cortice cinereo, ramoſi, ramis oppoſitis.

FOLIA terna, linearia, patentia, ſupra glabra, nitida, tranſverſim rugoſa, infra canaliculata, ſaturate viridia, *fig.* 1, 2.

FLORES ſaturate purpurei, tactu ſonori, ſpicati, ſpicis longis, verticillato-glomerati, terminalibus.

CALYX PERIANTHIUM tetraphyllum, foliolis lanceolatis, acuminatis, margine membranaceis, coloratis, perſiſtentibus, foliolis duobus acutis et multo minoribus ad baſin, *fig.* 3, 5.

COROLLA monopetala, ovata, ore quadrifido, laciniis obtuſis, ſæpe emortuis, perſiſtens, *fig.* 4.

STAMINA: FILAMENTA octo, ſubulata, alba, Corollâ breviora, receptaculo inſerta; ANTHERÆ ſubſagittatæ cohærentes, biloculares, bicornes, cornibus laciniatis, ad baſin rubris, biforaminoſæ, *fig.* 6, 7.

PISTILLUM: GERMEN cylindraceum, ſulcatum; STYLUS ſubulatus, purpureus, Corollâ incluſus, Staminibus longior; STIGMA ſubrotundum *fig.* 8, 9, 10.

PERICARPIUM CAPSULA ſubrotunda, quadrilocularis, quadrivalvis.

SEMINA plura, ſubovata, ſuperficie reticulata, Tetralicis quadruplo majora.

ROOT perennial and woody.

STALKS ſhrubby, about a foot high, woody; the bark of an aſh colour, branched; the branches oppoſite.

LEAVES growing three together, linear, ſpreading, above ſmooth and ſhining, tranverſly wrinkled; below hollow, of deep green colour, *fig.* 1, 2.

FLOWERS of a deep purple colour, ſonorous when touched, growing in long, cluſtered, whirled ſpikes, which are terminal.

CALYX: a PERIANTHIUM of four leaves, of a pointed oval ſhape, membranous at the edge, coloured, continuing, with two pointed and much ſmaller leaves at the bottom of them, *fig.* 3, 5.

COROLLA of one Petal, oval, the mouth divided into four ſegments, which often occur withered, continuing, *fig.* 4.

STAMINA: eight FILAMENTS, tapering, white, ſhorter than the Corolla, inſerted into the Receptacle: ANTHERÆ ſomewhat arrow ſhaped, adhering together, with two cavities open at top, and two little horns which are jagged and red at bottom, *fig.* 6, 7.

PISTILLUM: GERMEN cylindrical, grooved: STYLE tapering, purple, incloſed within the Corolla, but longer than the Stamina: STIGMA roundiſh, *fig.* 8, 9, 10.

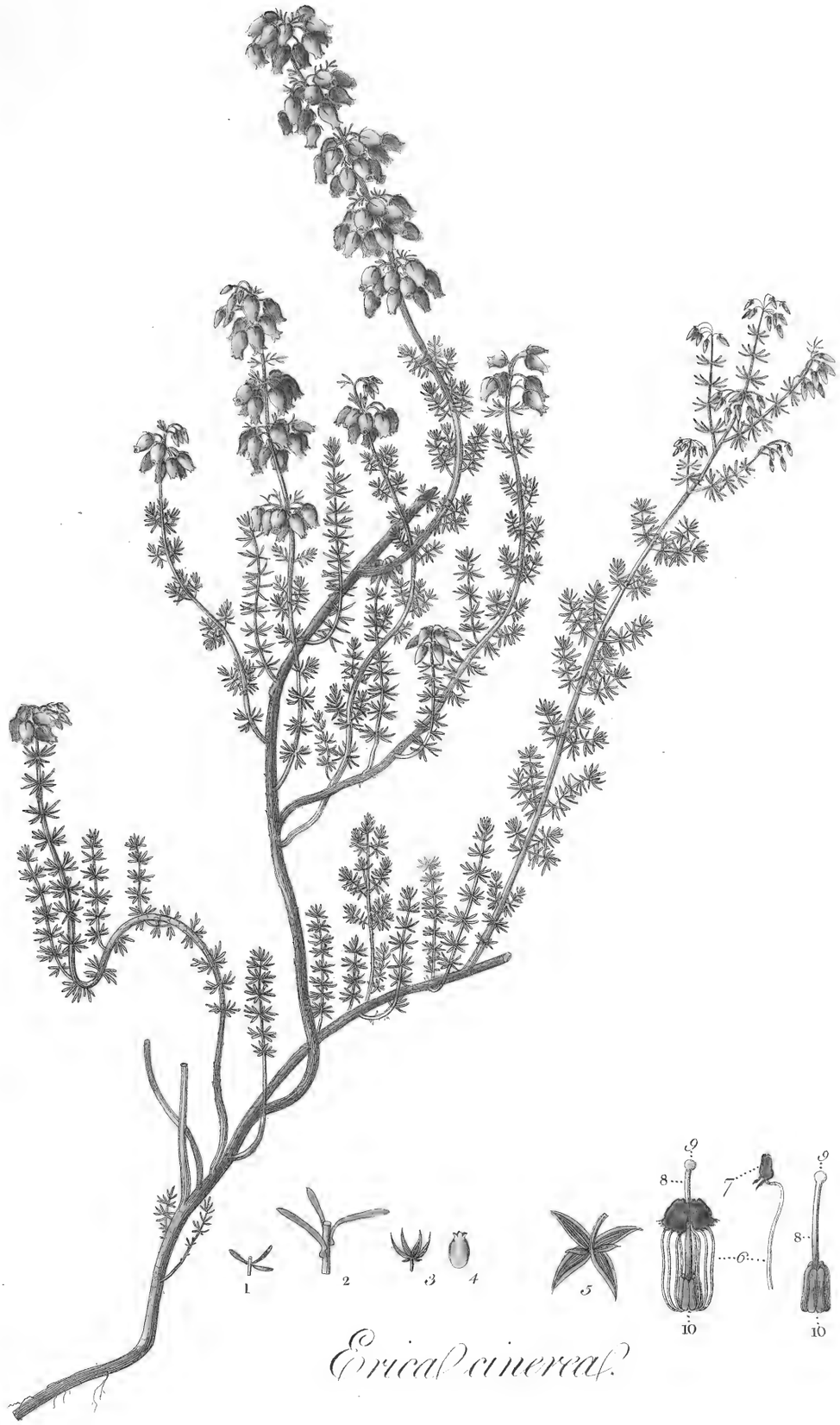
SEED-VESSEL a roundiſh Capſule of four cavities and four valves.

SEEDS ſeveral, of an oval ſhape, the ſurface reticulated, four times larger than thoſe of the croſs leaved Heath.

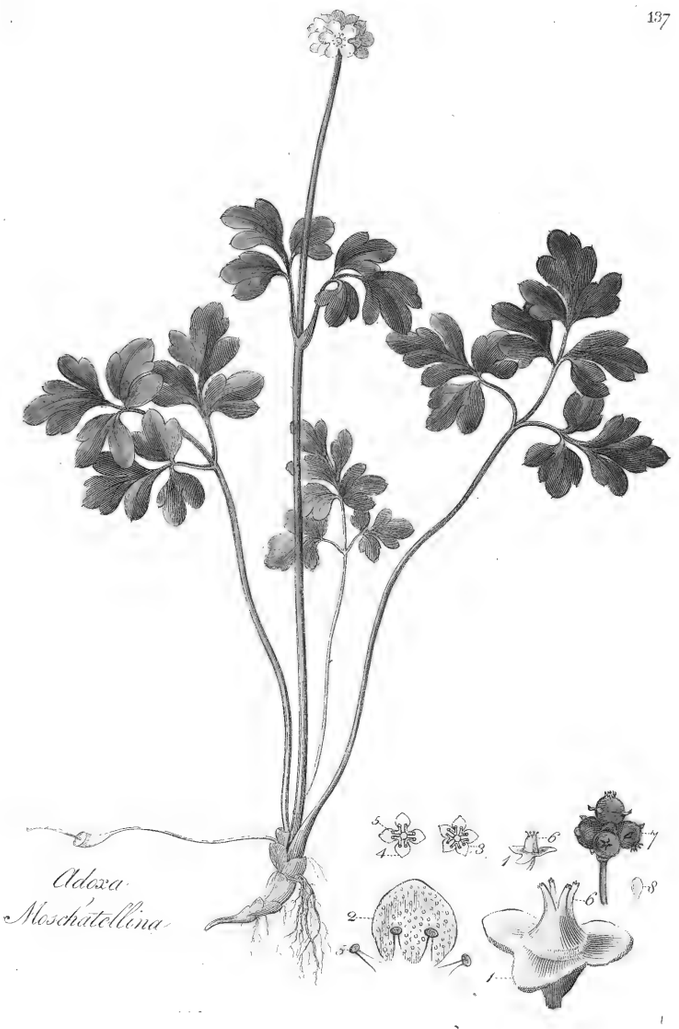
THIS ſpecies of *Heath*, which produceth the moſt ſhowy flowers, grows generally with the *croſs-leaved* and *common Heath*; and flowers in July and Auguſt.

As it grows to a pretty conſiderable height, it is applicable to the ſame uſes as the *common Heath.*

It is diſtinguiſhed from the *croſs-leaved Heath*, by the fineneſs, ſmoothneſs and deep green colour of its leaves: its flowers alſo grow more in ſpikes, and are of a deeper purple colour.



Erica? cinerea?


Adoxa
Moschatellina
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ADOXA MOSCHATELLINA. TUBEROUS MOSCHATEL.

ADOXA *Linnæi Gen. Pl.* OCTANDRIA TETRAGYNIA.

Cal. 2-fidus, inferus. *Cor.* 4-ſ. 5-fida, ſupera. *Bacca* 4-ſ. 5-locularis, calyce coalita.

Raii Syn. Gen. 16. HERBÆ BACCIFERÆ.

ADOXA *Moſchatellina. Linnæi Syſt. Vegetab. p.* 315. *Sp. Pl.* 527. *Fl. Suecic. p.* 132.

MOSCHATELLINA *Haller hiſt.* 429.

MOSCHATELLA *Adoxa. Scopoli. Fl. Carniol. p.* 281.

MOSCHATELLINA foliis fumariæ bulboſæ. *I. B.* III. 206.

RANUNCULUS nemoroſus Moſchatella dictus. *Parkinſon* 226.

RANUNCULUS nemorum Moſchatellina dictus. *Bauhin. Pin.* 178.

RADIX CAVA minima viridi flore. *Gerard emac.* 1091. *Raii Syn. p.* 268, Tuberous Moſchatel. *Hudſon Fl. Angl. ed.* 2. *p.* 172. *Lightfoot Fl. Scot. p.* 209. *Oeder Fl. Dan. ic.* 139.

RADIX perennis, repens, dentata, alba.

ROOT perennial, creeping, toothed, and of a white colour.

FOLIA *radicalia* tria aut quatuor, tri-ternata, inciſa, glabra, lobis ovatis, mucronatis, *caulina* duo brevius petiolata, oppoſita.

LEAVES: *radical* leaves commonly three or four, triply ternate, deeply cut in, ſmooth, and ſhining; the ſegments or lobes oval, with a ſhort point: thoſe of the ſtalk two in number, ſtanding on ſhorter foot-ſtalks, and oppoſite.

CAULIS folia ſuperans, ſimplex, ſubtetragonus.

STALK ſomewhat taller than the leaves, ſimple, and nearly ſquare.

PEDUNCULUS quadrangularis, nudus, terminalis.

FLOWER-STALK ſquare, naked, and terminating the ſtalk.

CAPITULUM tetragonum, ex quatuor floribus verticillatis, quinto terminali.

HEAD ſquare, from the union of four of the flowers, and terminated by the fifth.

CALYX: PERIANTHIUM inferum, ſæpius triangulare, planum, perſiſtens, *fig.* 1.

CALYX: a PERIANTHIUM placed beneath the germen, moſt commonly triangular, flat, and permanent, *fig.* 1.

COROLLA monopetala, rotata, plana, quadrifida, aut quinquefida, laciniis ovatis, acutis, calyce longioribus, *fig.* 2, 3, 4.

COROLLA monopetalous, wheel-ſhaped, flat, divided into four or five ſegments, which are oval, pointed, and longer than the calyx, *fig.* 2, 3, 4.

STAMINA: FILAMENTA octo aut decem, ſubulata, longitudine calycis: ANTHERÆ flavæ, planæ, orbiculatæ, *fig.* 5.

STAMINA: eight or ten FILAMENTS, tapering, the length of the calyx: ANTHERÆ yellow, flat, and round, *fig.* 5.

PISTILLUM: GERMEN ſubrotundum, calyce cinctum: STYLI plerumque quatuor, ſimplices, erecti, longitudine ſtaminum, perſiſtentes: STIGMATA ſimplicia, *fig.* 6.

PISTILLUM: GERMEN roundiſh, ſurrounded by the calyx: STYLES generally four, ſimple, upright, the length of the ſtamina, permanent: STIGMATA ſimple, *fig.* 6.

PERICARPIUM: BACCA globoſa, viridis, quadrilocularis, cum calyce coalita, *fig.* 7.

SEED-VESSEL; a round BERRY of a green colour, having four cavities, and united to the calyx, *fig.* 7.

SEMINA ſolitaria, ovata, compreſſa, *fig.* 8.

SEEDS ſingle, oval, and flattened, *fig.* 8.

SOME of the antient botaniſts conſidered this ſingular plant as a *Fumaria*, others as a *Ranunculus*, from the appearance of its foliage; but an attention to its fructification, ſhews it to be a plant altogether *ſui generis*.

It is one of the bacciferous plants of RAY, but its berries are rarely produced, and not to be diſcovered without a nice examination.

It varies much in the diviſions of its Calyx, and Corolla, as well as in the number of its Stamina, even in the terminal flower.

In *Charlton Wood* we find it abundantly, flowering in April and May.

Chryſoſplenium Oppoſitifolium. Common Golden Saxifrage.

CHRYSOSPLENIUM *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Cal. 4-ſ. 5-fidus, coloratus. *Cor.* 0. *Caps.* 2-roſtris, 1 locularis, polyſperma.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

CHRYSOSPLENIUM *oppoſitifolium* foliis oppoſitis. *Lin. Syſt. Vegetab. p.* 342. *Sp. Pl.* 569.

CHRYSOSPLENIUM foliis conjugatis. *Haller. Hiſt. No.* 1549.

SAXIFRAGA rotundifolia aurea. *Bauhin. pin. p.* 309.

SAXIFRAGA aurea. *Ger. emac.* 841. *Parkinſon* 425. *Raii Syn.* 158. Golden Saxifrage.
Hudſon Fl. Angl. p. 156.
Oeder Fl. Dan. ic. 365.
Lightfoot Fl. Scot. p. 220.

RADICES perennes, fibroſæ, capillares.

CAULES baſi repentes, quadrati, tenerrimi, erecti, palmares et ultra, pilis raris hirſuti; ramoſi, ſuperne dichotomi.

FOLIA oppoſita, connata, petiolata, patentia, ſubrotunda, pilis raris albidis hirſuta, dentato-crenata, ſubcarnoſa, e flavo vireſcentia, ſubtus albida, ſuprema profundius crenata.

FLORES flavi, ſeſſiles, ſummis ramis inſidentes, corymboſi, faſtigiati.

CALYX: PERIANTHIUM quadripartitum, rarius quinquepartitum, patens, flavum, perſiſtens; laciniis ovatis, ſubæqualibus, *fig.* 1, 2.

COROLLA nulla.

STAMINA: FILAMENTO octo, (in ſupremo flore decem aliquando obſervantur,) ſubulata, erecta, longitudine fere calycis: ANTHERÆ didymæ, ſubrotundæ, flavæ, *fig.* 3, 4.

NECTARIUM ſquamula crenulata germen cingens, *fig.* 5.

PISTILLUM: GERMEN inferum, deſinens in STYLOS duos, ſubulatos, longitudine ſtaminum: STIGMATA obtuſa, *fig.* 6.

PERICARPIUM: CAPSULA biroſtris, bipartita, unilocularis, bivalvis, calyce viridi cincta.

SEMINA plurima, minuta, aurantiaca.

ROOTS fibrous, capillary, and perennial.

STALKS creeping at bottom, ſquare, very tender, upright, about four inches in height, beſet with a few ſtiffiſh hairs, branched, and forked at top.

LEAVES oppoſite, connate, ſtanding on foot-ſtalks, ſpreading, of a roundiſh figure, beſet with a few white ſtiffiſh hairs, indented or crenated at the edges, ſomewhat fleſhy, of a yellowiſh green colour, but whitiſh underneath; the uppermoſt leaves more deeply notched.

FLOWERS yellow, ſeſſile, ſitting on the tops of the branches, forming a corymbus perfectly flat at top.

CALYX: a PERIANTHIUM divided into four ſegments, ſeldom into five, ſpreading, of a yellow colour, and continuing; the ſegments ovate, and nearly equal, *fig.* 1, 2.

COROLLA wanting.

STAMINA: eight FILAMENTS, (in the top flower ten are ſometimes obſervable,) tapering, upright, almoſt the length of the calyx: ANTHERÆ double, roundiſh, and yellow, *fig.* 3, 4.

NECTARY a ſcale with a crenated edge, ſurrounding the germen, *fig.* 5.

PISTILLUM: GERMEN placed below the calyx, ending in two tapering STYLES, the length of the Stamina: STIGMATA blunt, *fig.* 6.

SEED-VESSEL; a CAPSULE having two beaks or horns, dividing in the middle, of one cavity, and two valves, ſurrounded by a green Calyx.

SEEDS numerous, minute, of an orange colour.

THE antient botaniſts ſhewed no ſmall botanic diſcernment in conſidering this plant as a *Saxifraga*; and although in ſtrict propriety it may be neceſſary to form a different genus of it, yet its affinity muſt be confeſſed to be very great.

The part which LINNÆUS calls the *Receptaculum angulatum*, appears to be more properly a kind of *Nectarium*; the Stamina proceed from beneath, not out of it.

As the terminal flower in this plant is rarely divided into more than four ſegments, and has only eight Stamina, it would perhaps be more proper to place it in the claſs OCTANDRIA.

It grows in great abundance in the boggy part of *Charlton Wood*; and flowers in April. The ſeeds ripen in May.

Authors are ſilent as to its uſeful or noxious qualities.

Chrysosplenium oppositifolium

Sansom Sculp

SAXIFRAGA TRIDACTYLITES. RUE-LEAVED SAXIFRAGE.

SAXIFRAGA *Linnæi Gen. Pl.* DECANDRIA DIGYNIA.

Cal. 5-partitus. *Cor.* 5-petala. *Caps.* 2-roſtris, 1 locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAXIFRAGA *tridactylites* foliis caulinis cuneiformibus trifidis alternis, caule erecto ramoſo. *Linnæi Syſt. Vegetab. p.* 344. *Sp. Pl. p.* 578. *Fl. Suecic. p.* 143.

SAXIFRAGA foliis petiolatis trilobatis caule erecto ramoſo et folioſo. *Haller. hiſt. helv. p.* 422. *n.* 986.

SAXIFRAGA *tridactylites. Scopoli. Fl. Carniol. p.* 237. *n.* 500.

SEDUM tridactylites tectorum. *Bauhin. Pin.* 285.

PARONYCHIA rutaceo folio. *Gerard. emac.* 624.

PARONYCHIA foliis inciſis. *Parkinſon.* 556.

SAXIFRAGA verna annua humilior. *I. R. H.* 252. *Raii Syn. p.* 354, Rue Witlow-graſs.

Hudſon Fl. Angl. p. 159. *ed.* 2. 182.

Lightfoot Fl. Scot. p. 224.

RADIX annua, fibroſa.

CAULIS plerumque triuncialis, erectus, teres, ruberrimus, ramoſus, pilis glanduliferis veſtitus ut ut folia cum calycibus.

FOLIA ima integra, ſubrotunda, caulina ſicut aſcendunt bipartita, tripartita aut quinquepartita, ſubcarnoſa, rigida, patentia, petiolis foliis longioribus complanatis inſidentia, ſuprema ſeſſilia, bipartita aut ſimplicia, ovato-lanceolata, ſuberecta.

FLORES albi, erecti, parvi.

CALYX: PERIANTHIUM monophyllum, quinquepartitum, breve, laciniis ovato-acutis, ſuberectis, *fig.* 1.

COROLLA: PETALA quinque exigua, laciniis calycis paulo longiora, ovata, obtuſa, patentia, baſi anguſta, immaculata, *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata: ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN inferum, calyce obtectum, ſubrotundum, definens in STYLOS duos breves: STIGMATA villoſa, *fig.* 4.

PERICARPIUM: CAPSULA ſubrotunda, bilocularis, biroſtris, ore aperto, ovato, integro.

SEMINA minima, nigricantia.

ROOT annual and fibrous.

STAK generally about three inches high, upright, round, of a bright red colour, branched and covered (as alſo the leaves and calyx) with hairs having glands at their extremities.

LEAVES: the bottom leaves entire and roundiſh; thoſe of the ſtalk as they aſcend, are deeply divided into two, three, or five ſegments, ſomewhat fleſhy, rigid, and ſpreading, ſitting on flattened foot-ſtalks longer than the leaves; the uppermoſt leaves ſeſſile, divided into two ſegments, or intire, of an oval pointed ſhape, and nearly upright.

FLOWERS white, ſmall, and upright.

CALYX: a PERIANTHIUM of one leaf, ſhort, and divided into five ſegments, which are oval, pointed, and upright, *fig.* 1.

COROLLA: five ſmall PETALS, a little longer than the ſegments of the calyx, oval, blunt, and ſpreading, narrowed at bottom, and ſpotleſs, *fig.* 2.

STAMINA: ten FILAMENTS, tapering towards the top: ANTHERÆ roundiſh and yellow, *fig.* 3.

PISTILLUM: GERMEN placed below the calyx and covered by it, of a roundiſh ſhape, and terminating in two ſhort STYLES: the STIGMATA villous, *fig.* 4.

SEED-VESSEL a roundiſh CAPSULE of two cavities and two beaks, the mouth oval, open, and intire.

SEEDS very minute, of a blackiſh brown colour.

IN the months of April and May, this little plant ſucceeds the *Draba verna*, and is no ſmall ornament to the tops of our walls. It grows alſo on houſes, and among rubbiſh.

It varies in ſize from one to ſix inches, or even more in particular ſituations: the larger it grows, the more branched it becomes, and the more numerous are the diviſions of its leaves: on the contrary in its ſmall ſtate, the ſtalk is frequently ſimple, and the leaves undivided.

Its medical virtues, if any, are not ſufficient to preſerve it in the preſent practice.

Saxifraga Tridactylites


Saponaria officinalis
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SAPONARIA OFFICINALIS. SOPEWORT.

SAPONARIA *Linn. Gen. Pl.* DECANDRIA DIGYNIA.
Cal. 1-phyllus, nudus. *Petala* 5, unguiculata. *Caps*, oblonga, 1-locularis.

Raii Syn. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SAPONARIA *officinalis*, calycibus cylindricis foliis ovato-lanceolatis. *Lin. Syſt. Vegetab. p.* 347. *Spec. Pl.* 584.

SAPONARIA foliis ovato-lanceolatis, trinerviis; floribus tubuloſis, umbellatis. *Haller hiſt. helv. n.* 980.

LYCHNIS *officinalis*. *Scopoli. Fl. Carniol. p.* 303. *n.* 510.

SAPONARIA major lævis. *Bauhin. pin.* 206.

SAPONARIA *Ger. emac.* 444.

SAPONARIA vulgaris. *Parkinſon.* 641.

LYCHNIS Saponaria dicta. *Raii Syn. p.* 339. Common Sopewort. *Hudſon Fl. Angl. p.* 339. *Oeder. Fl. Dan. icon.* 543.

RADIX perennis, cortice rubente tecta, profunde deſcendens, lateque reptans, gemmis vivacibus inſtructa, hinc tritici repentis æmulus, ex hortis difficillime extirpatur.

CAULES pedales et ultra, erecti, rigidi, teretes, ſubrubentes, geniculati, ſuperne ramoſi, ramis oppoſitis.

FOLIA ovato-lanceolato, connata, brachiatim oppoſita, glabra, trinervia, patentia.

FLORES terminales, ſubumbellati, carnei.

CALYX: PERIANTHIUM monopyllum, tubuloſum, baſi intropreſſum, ſcabriuſculum, oblongum, quinquedentatum, *fig.* 1.

COROLLA: PETALA quinque; *ungues* anguſti, angulati, calyce paulo longiores, *fig.* 3, 4; *limbus* planus, obcordatus, baſi bidentatus, *fig.* 3.

STAMINA: FILAMENTA decem, ſubulata, longitudine tubi corollæ, alterna unguibus petalorum inſerta: ANTHERÆ oblongæ, pallidæ, *fig.* 5.

PISTILLUM: GERMEN oblongum, teretiuſculum, tranſverſe rugoſum, viride: STYLI duo, ſubulati, albi: STIGMATA ſimplicia, *fig.* 6, 7, 8.

PERICARPIUM: CAPSULA oblonga, unilocularis, longitudine calycis, ventricoſa, calyce tecta, ore quadridentato, *fig.* 9.

SEMINA plurima, nigricantia, reniformia, ſuperficie granulatâ, *fig.* 10, 11.

ROOT perennial, covered with a reddiſh coloured bark, ſtriking deep into the ground, and ſpreading wide, furniſhed with living buds, whence, like Couch-Graſs, it is with the greateſt difficulty rooted out of gardens.

STALKS a foot or more in height, upright, rigid, round, of a reddiſh colour, jointed, at top branched, the branches oppoſite.

LEAVES of an oval pointed ſhape, connate, alternately oppoſite, ſmooth, with three ribs, and ſpreading.

FLOWERS terminal, forming a kind of umbell, fleſh coloured.

CALYX: a PERIANTHIUM of one leaf, tubular, preſſed in at the baſe, roughiſh, oblong, with five teeth, *fig.* 1.

COROLLA: five PETALS, the claws narrow, angular, a little longer than the Calyx, *fig.* 3, 4; the *limb* flat, inverſely heart-ſhaped, furniſhed at bottom with two little teeth, *fig.* 3.

STAMINA: ten FILAMENTS, tapering, the length of the tube of the Corolla; the alternate ones inſerted into the claws of the petals: ANTHERÆ oblong, of a pale colour, *fig.* 5.

PISTILLUM: GERMEN oblong, roundiſh, tranverſly wrinkled, and green: STYLES two, tapering, and white; STIGMATA ſimple, *fig.* 6, 7, 8.

SEED-VESSEL: an oblong CAPSULE of one cavity, the length of the Calyx, bellying out, covered with the Calyx; the mouth having four teeth, *fig.* 9.

SEEDS numerous, blackiſh, kidney ſhaped, the ſurface granulated, *fig.* 10, 11.

The name of *Sopewort* has been given to this plant, from its anſwering in a conſiderable degree, the purpoſes of ſoap, forming like it, a lather with water, and taking out ſpots of greaſe, &c. from cloth in the ſame manner; whence it has alſo been called the *Fullers-herb.*

Some botaniſts are ready to doubt whether this herb be a native of Great Britain; but the teſtimonies of GERARD and RAY, appear ſufficient to confirm it as ſuch. Being often cultivated in gardens, on account of its beauty, it is no doubt often found among the *refuſe of gardens*; and the plants which we have here and there met with in a few places about town, may probably have been of this kind.

It is ſaid naturally to grow in moiſt ſituations; and flowers during the months of July, Auguſt and September.

There are ſeveral varieties of it cultivated in the gardens, from the perfectly white to the deep purple bloſſom'd, both ſingle and double; as alſo that ſingular variety the *Saponaria concava anglica* of BAUHINE and MORISON, in which the leaves ſurround the ſtalk, and the bloſſom becomes monopetalous, but generally ſplit, and deſtitute of the other parts of the fructification; found originally by GERARD, in a ſmall grove of a wood called the *Spiney*, near *Lichbarrow*, in *Northamptonſhire*; where, according to the teſtimony of MORTON, *hiſt. nat. agr. North.* it is no longer to be found; and which variety appears more like a luſus naturæ, as RAY conſiders it, than a mule plant, produced betwixt a Gentian and the Sopewort, as LINNÆUS firſt ſuggeſted.

All theſe varieties are eaſily cultivated: indeed much care is required, that they do not ſpread too much in the garden.

A decoction of the dried herb, does not form a lather ſo well as that of the freſh herb. A decoction of the dried root, makes a lather exactly like a ſolution of ſoap, but not ſo ſlippery; *Berg. Mat. Med.*

Greaſe and dirt were waſhed out with it, but not ſtains; *idem.*

The root taſted not bitter, but ſweet; afterwards warm and biting in the throat; *Rutty Mat. Med.*

The taſte of the leaves bitter, mucilaginous, ſlightly auſtere, and acrid, and if chewed long, quite acrid: the decoction alſo bitter, and auſtere; but not changed by vitriol of iron; *idem.*

The watery infuſion of the dried herb, ſuddenly became of a blackiſh green colour, by the addition of vitriol of iron; but not the infuſion of the root; *Bergius.*

In baths and lotions, it has been made uſe of to cleanſe and beautify the ſkin; *idem.*

Internally the decoction of the whole herb is ſudorific, and promotes the menſes; *idem.*

If the decoction be very ſtrong, it proves purgative; *idem, ex Mangeto.*

The leaves and root are made uſe of in the aſthma: half a dram of the root taken with honey, promotes expectoration; *idem.*

In the jaundice, chronic diſeaſes, and obſtructions of the viſcera, it has been recommended by BOERHAVE; *Haller hiſt. helv.*

By others it has been recommended in venereal and ſcrophulous diſeaſes, particularly in the former by STAHL, who deemed it ſuperior to Sarſaparilla; *Newman's Chem. by Lewis.*

30

Stellaria Holostea

STELLARIA HOLOSTEA. THE GREATER STICHWORT

STELLARIA *Linnæi Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. 5-phyllus, patens. *Petal.* 5. bipartita. *Caps.* 1-locularis, polyſperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

STELLARIA *Holoſtea* foliis lanceolatis ſerrulatis, petalis bifidis. *Lin. Syſt. Vegetab. p.* 352. *Fl. Suecica. p.* 150.

ALSINE foliis gramineis ciliatis. *Haller hiſt. No.* 884.

STELLARIA *Holoſtea. Scopoli Fl. Carniol. p.* 314.

CARYOPHYLLUS holoſteus arvenſis glaber flore majore. *Bauhin pin.* 210.

GRAMEN leucanthemum. *Gerard emac.* 47. *Parkinſon.* 1325. *Raii Syn.* 346, The Greater Stichwort. *Hudſon Fl. Angl. p.* 166.

RADIX tenui et infirma radicula, ſummo ceſpite geniculata reptat, demiſſis tamen altius fibris.

ROOT weak, ſlender and jointed, creeps on the ſurface of the ground, ſending down fibres to a conſiderable diſtance.

CAULES plures, denſe naſcuntur, erecti, pedales, quadrati, geniculati, ſcabriuſculi, fragiles, baſi pertenues.

STALKS ſeveral, growing thickly together, upright, a foot high, ſquare, jointed, roughiſh, brittle, very ſlender at bottom.

FOLIA lanceolato-acuminata, ſubconnata, rigidula, inferne carinata, ſerrulata, ſeu potius ſetis rigidiuſculis ciliata, ſuperiora adſcendentia, marginibus revolutis, e cœruleo-vireſcentia, inferiora crebriora, breviora, deorſum flexa, flava.

LEAVES narrow and pointed, at their baſes ſlightly uniting, ſomewhat ſtiff, underneath keel-ſhaped, ſerrated at the edges, or rather edged with very fine ſtiff hairs or briſtles; the upper leaves growing ſomewhat upright, the edges turning back, of a bluiſh green colour; the lower leaves more numerous, ſhorter, bending back, and of a yellow colour.

FLORES albi, longis petiolis ſcabriuſculis inſidentes, e dichotomia caulis prodeuntes.

FLOWERS white, ſtanding on long rough foot-ſtalks, and proceeding from the forked diviſion of the ſtalk.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-lanceolatis, concavis, marginatis, lævibus, patentibus, perſiſtentibus, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, of an oval pointed ſhape, hollow, edged, ſmooth, ſpreading and continuing, *fig.* 1.

COROLLA: PETALA quinque, magna, bipartita, obcordata, alba, nervoſa, baſi vireſcentia, patentia, *fig.* 2.

COROLLA: five white PETALS, large, divided at top, heart-ſhaped, rib'd, green at bottom, ſpreading, *fig.* 2.

STAMINA: FILAMENTA decem, alba, ſubulata, corollâ breviora, alterna glandulâ flaveſcenti ad baſin inſtructa: ANTHERÆ flavæ, oblongæ, inſidentes, *fig.* 3.

STAMINA: ten white FILAMENTS, tapering, ſhorter than the corolla, the alternate ones furniſhed at bottom with a yellowiſh gland: ANTHERÆ yellow, oblong, fitting on the filaments, *fig.* 3.

PISTILLUM: GERMEN ſubrotundum: STYLI tres, filiformes patentes: STIGMATA obtuſa, *fig.* 4.

PISTILLUM: GERMEN roundiſh: STYLES three, thread-ſhaped, ſpreading: STIGMATA bluntiſh, *fig.* 4.

PERICARPIUM: CAPSULA ſubrotunda, membranacea, unilocularis, ſexvalvis, *fig.* 6.

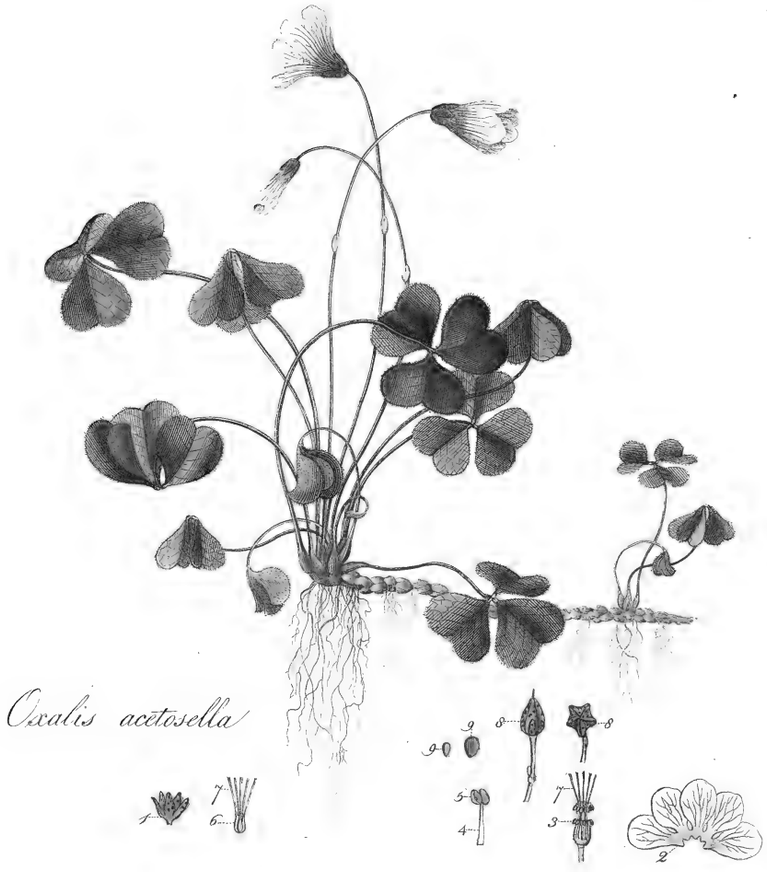
SEED-VESSEL a roundiſh membranous CAPSULE, of one cavity and ſix valves, *fig.* 6.

SEMINA plerumque quinque aut ſex majuſcula, aurantiaca, reniformia, pulchre crenulata, *fig.* 7.

SEEDS for the moſt part five or ſix, largeiſh, of a deep orange colour and beautifully notched, *fig.* 7.

THE *Stellaria Holoſtea* grows very common with us, and with its white delicate bloſſoms enlivens our woods and banks early in the Summer. Its ſeeds are very beautiful and like the *Chickweed*, but larger.

A very pretty Moth, called by the Aurelians the *leaſt Yellow Underwing*, whoſe hiſtory is unknown, is by them frequently caught hovering over the flowers of this plant when the ſun ſhines ſtrong.



Oxalis acetosella

OXALIS ACETOSELLA. WOOD-SORREL.

OXALIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* unguibus connexa. *Caps.* angulis dehiſcens, 5-gona.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

OXALIS *Acetoſella* ſcapo unifloro, foliis ternatis obcordatis, radice dentata. *Linnæi. Syſt. Vegetab. p.* 360. *Sp. Pl. p.* 620. *Fl. Suecic. n.* 406.

OXYS ſcapo unifloro, foliis ternatis, radice ſquamoſo-articulata. *Haller. hiſt. p.* 402.

OXYS *Acetoſella. Scopoli Fl. Carniol. n.* 561.

TRIFOLIUM acetoſum vulgare. *Bauhin. pin.* 330. *Parkinſon.* 746.

OXYS alba. *Ger. emac.* 1201.

ACETOSELLA et Lujula ſeu Alleluja *Offic. Raii Syn. p.* *281, Wood-Sorrel. *Hudſon. Fl. Angl. p.* 173. *Lightfoot. Fl. Scot. p.* 238.

RADIX perennis, horizontalis, ſquamoſo-dentata, ruberrima.

FOLIA terna, obcordata, ex flavo-vireſcentia, ſubtus ſæpe purpurea, pilis raris adſperſa, petiolis longis inſidentia.

PETIOLI palmares, erectiuſculi, teneri, e bulbillo vaginante prodeuntes, ad baſin ruberrimi, teretes, ſuperne ad unum latus ſulcati.

FLORES albi aut carnei, venis rubris eleganter ſtriati.

SCAPI uniflori, longitudine foliorum, bractæis duabus ovato-acutis vaginantibus prope apicem inſtructi.

CALYX: PERIANTHIUM quinquepartitum, breve, perſiſtens, maculis purpureis ſæpe notatum, laciniis obtuſiuſculis margine membranaceis, *fig.* 1.

COROLLA: PETALA quinque, unguibus paululum incurvatis receptaculo affixa, et paulo ſupra ungues cohærentia, obtuſa, ſubcrenata, baſi flavedine tincta, *fig.* 2.

STAMINA: FILAMENTA decem, erecta, alba, quinque exteriora breviora, *fig.* 3, 4: ANTHERÆ flaveſcentes, biloculares, *fig.* 5.

PISTILLUM: GERMEN quinquangulare, viride: STYLI quinque capillares, ſtaminibus paulo longiores: STIGMATA obtuſa, *fig.* 6, 7.

PERICARPIUM: CAPSULA ſubovata, pentagona, maculata, quinquelocularis, angulis longitudinaliter dehiſcentibus, *fig.* 8, 8.

SEMINA: tria in ſingulo loculamento, cordata, per longitudinem ſtriata, utrinque convexa, rufa, ARILLO nitido albo elaſtico incluſa, quo diſrupto ejiciuntur, *fig.* 9, 9.

ROOT perennial, horizontal, ſcaly, and of a bright red colour.

LEAVES growing three together, inverſely heart-ſhaped, of a yellowiſh green colour, frequently purple underneath, beſet with a few hairs, and ſitting on long foot-ſtalks.

LEAF-STALKS about three inches long, nearly upright, tender, proceeding from a little bulb which forms a kind of ſheath to it; at bottom very red and round; the upper part grooved on one ſide.

FLOWERS white or fleſh-coloured, and elegantly ſtreaked with red veins.

FLOWER-STALK, ſupporting a ſingle bloſſom, the length of the leaves, furniſhed near the top with two oval pointed Bracteæ, which partly ſurround it.

CALYX: a PERIANTHIUM deeply divided into five ſegments, ſhort and permanent, often ſpotted with purple; the ſegments bluntiſh, and membranous at the edges, *fig.* 1.

COROLLA: five PETALS, affixed to the receptacle by the claws, which bend a little inward, juſt above the claws adhering together, blunt, ſlightly crenated, and tinged at bottom with yellow, *fig.* 2.

STAMINA: ten FILAMENTS, upright and white, the five exterior ones ſhorteſt, *fig.* 3, 4; ANTHERÆ yellowiſh, and bilocular, *fig.* 5.

PISTILLUM: a GERMEN, four corner'd and green: STYLES five, very ſlender, and a little longer than the Stamina: STIGMATA blunt, *fig.* 6, 7.

SEED-VESSELL: a CAPSULE ſomewhat oval, five cornered, ſpotted, with five cavities, the angles burſting longitudinally, *fig.* 8, 8.

SEEDS: three in each cavity, heart-ſhaped, and grooved longitudinally, convex on both ſides, of a bright reddiſh brown colour, and incloſed within a ſhining white elaſtic ARILLUS, which burſting they are thrown out, *fig.* 9, 9.

IN this little plant, there is a delicacy of ſtructure ſuperior to what we obſerve in moſt: there are ſome circumſtances alſo in the oeconomy of the plant not leſs worthy our attention; and which, I believe, have not hitherto been noticed. The firſt of theſe is the ſame proceſs, with reſpect to the plants ſeeding, which we obſerve in the Violets. If this plant be attentively obſerved, it will be found to continue producing ſeed-veſſels and ſeeds, during the greateſt part of the ſummer, without any appearance of expanded bloſſoms, which are only obſervable at one particular ſeaſon of the year. As ſoon as the plant has done flowering, the flower-ſtalk, as in many other plants, bends down; and when the ſeed is ripe, again becomes upright. The ſecond is, if theſe ſeed-veſſells, when ripe, are ſlightly preſſed, they open at the angles, and the ſeeds are thrown out at the apertures; but not from any elaſticity in the capſule itſelf, which continues unchanged: but the cauſe of their propulſion is a ſtrong white ſhining arillus, which covers the ſeed, and which burſting, by its elaſticity throws the ſeeds to a conſiderable diſtance.

There are but few woods about us in which the *Wood-Sorrel* does not occur. It will not grow in a garden unleſs it has ſhade.

April and May are the months in which it flowers.

It is ſaid to vary with blueiſh and purple-coloured bloſſoms.

The leaves in wet weather, are expanded; but in dry weather they droop; *Linnæi Fl. Suecic.* They are alſo ſaid by ſome authors, to manifeſt a degree of ſenſibility on being ſtruck. Poſſeſſing a very grateful acid taſte, ſuperior to common Sorrel, they have been uſed as an antiſeptic medicine, in malignant fevers, the ſcurvy, and all thoſe diſeaſes in which acids are indicated. The only form at preſent in uſe, is a conſerve of the leaves: but the ſyrup, infuſion, and juice of the leaves, and the leaves themſelves, have been uſed indifferently.

The eſſential ſalt, extracted from it by chryſtallization, is made uſe of for taking out iron moulds and ſpots of ink from linen: for this purpoſe, the ſtained part is dipped in water, ſprinkled with a little of the powdered ſalt, then rubbed on a pewter plate, after which the ſpot is waſhed out with warm water; *Newman's Chem. by Lewis.*

Twenty pounds of freſh Sorrel leaves yielded ſix pounds of juice; from which were obtained two ounces, two drams, and one ſcruple of chryſtalline ſalt; *ibid.*

According to experiments made by **Dr. *Lobb***, a piece of human calculus was diſſolved in the juice of this plant in nine days; *Rutty's Mat. Med.*

LYCHNIS DIOICA FLORE RUBRO. RED CAMPION.

LYCHNIS *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.

hæc ſpecies vero dioica eſt.

Cal. 1-phyllus, oblongus, lævis. *Petala* 5 unguiculata. *Limbo* ſubbifido.

Caps. 5-locularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

LYCHNIS *dioica* floribus dioicis. *Linnæi Syſt. Vegetab. p.* 362. *Fl. Suecic. p.* 156. *Sp. Pl. p.* 626.

LYCHNIS floribus ſexu diſtinctis. *Haller. hiſt. n.* 923.

LYCHNIS *dioica. Scopoli Fl. Carniol. n.* 530.

LYCHNIS ſylveſtris ſive aquatica purpurea ſimplex. *Bauhin pin.* 204.

LYCHNIS ſylveſtris flore rubro. *Parkinſon.* 631.

LYCHNIS ſylveſtris rubello flore. *Gerard emac.* 469. *Raii Syn.* 339, Red Flowered Wild Campion.

Hudſon Fl. Angl. 174.

RADIX perennis, minimi digiti craſſitudine, alba, ſapore ſubacri et amaro, fibris multis donato.

CAULES ex una radice plures, erecti, pedales, aut tripedales etiam, teretes, hirſuti, geniculati, purpurei, geniculis incraſſatis, ramoſi, ramis ſuperioribus dichotomis.

FOLIA oppoſita, connata, ovato-acuminata, hirſuta, ſubnervoſa.

CALYX: PERIANTHIUM monophyllum, tubuloſum, hirſutum, ſtriatum, purpureum, quinquedentatum, perſiſtens, *fig.* 1; in femineâ turgidior, *fig.* 2.

COROLLA: PETALA quinque obcordata, purpurea, patentia, *fig.* 3; ad baſin laminæ, unguiculæ obtuſæ, bifidæ aut quadrifidæ, *fig.* 4.

STAMINA: FILAMENTA decem ſubulata, alba, quorum quinque longiora: ANTHERÆ flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: *Nectario* ad baſin cinctum, *fig.* 6: STYLI quinque longi: albi: villoſi: STIGMATA ſimplicia, *fig.* 7.

PERICARPIUM: CAPSULA unilocularis, ore decemdentato, *fig.* 8.

SEMINA plurima, cana, ſcabriuſcula, *fig.* 9.

ROOT perennial, the thickneſs of the little finger, white, of a ſlightly acrid and bitter taſte, furniſhed with numerous fibres.

STALKS ſeveral from one root, upright, from one to three feet high, round, hirſute, jointed, purple, the joints ſwelled, branched, the uppermoſt branches forked.

LEAVES oppoſite, connate, oval-pointed, hirſute, and ſlightly nervous.

CALYX: a PERIANTHIUM of one leaf, tubular, hairy, ſtriated, purple, having five teeth, and continuing, *fig.* 1; in the female more turgid, *fig.* 2.

COROLLA: five purpliſh heart-ſhaped PETALS, ſpreading, *fig.* 3: at the bottom of the lamina or broad part of the petal, are two or four ſmall upright white blunt leaves, or additional petals, *fig.* 4.

STAMINA: ten white tapering FILAMENTS, of which five are longer than the others: ANTHERÆ yellowiſh, *fig.* 5.

PISTILLUM: GERMEN oval, ſurrounded by a *Nectarium* at bottom, *fig.* 6: STYLES five, long and white: STIGMATA ſimple, *fig.* 7.

SEED-VESSEL a CAPSULE of one cavity, the mouth having ten teeth, *fig.* 8.

SEEDS numerous, grey and rough, *fig.* 9.

THE *Lychnis* tribe in general produce both Stamina and Styles in the ſame flower; but in this ſpecies we ſee a remarkable inſtance of the capricious inconſtancy of nature, who ſeems to ſpurn the fetters of ſyſtematic diſtinction, and laughs at mans attempt of ſubjecting her to particular rules; for here the Stamina and Styles grow on ſeparate plants; yet they are placed by LINNÆUS in his Claſs *Decandria.* What could he have done in this caſe? had he placed it under *Monoecia*, he would have ſeparated plants evidently of the ſame genus: ſtill, however, it may be ſaid, he would have made the inveſtigation of the plant eaſier to the botanic ſtudent; nor would it have been the only inſtance where plants nearly ſimilar are diſunited, as in the *Anthoxanthum* and *Holeus*, which evidently belong to the Graſſes, yet are in ſeparate Claſſes.

Excluſive of this ſingular variation with regard to the ſex, there is a no leſs remarkable difference with reſpect to the colour of the flowers in different plants; ſome being conſtantly white and others as conſtantly red: this with ſome other circumſtances relative to the two plants, has led me to ſuſpect that they are not varieties but diſtinct ſpecies: cultivation and farther attention to them, will enable me to ſpeak of this with more certainty.

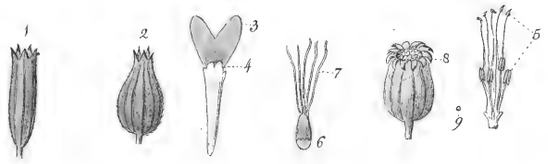
The red ſort here figured, grows in great abundance in moiſt ſhady ditches and by the ſides of hedges, and ſometimes in woods. It flowers in May and June.

Both the white and red are cultivated when double, and called by the Gardeners about town *Batchelors Buttons*, a name which ſeems with more propriety to belong to ſome of the double flowering *Crowfoots*, as the *Ranunculus acris* and *aconitifolius.*

The Aurelians, or thoſe who collect Inſects of the Moth and Butterfly kind, frequently catch the *Sphinx porcellus*, or *ſmall Elephant Hawk Moth*, on the flowers of this plant in the evening, and where it grows in abundance.

The ſeeds are liable to be eaten within the ſeed-veſſel, in July and Auguſt, by a Caterpillar which produces a *browniſh coloured Moth*, not figured, nor I believe hitherto noticed by any Entomologiſt.

Lychnis dioica?



Ceraſtium ſemidecandrum. Leaſt Mouſe-ear Chickweed.

CERASTIUM *Linnæi Gen. Pl.* DECANDRIA PENTAGYNIA.
Cal. 5-phyllus. *Petala* bifida. *Caps.* unilocularis, apice dehiſcens.
Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.
CERASTIUM *ſemidecandrum* floribus pentandris, petalis emarginatis. *Lin. Syſt. Vegetab. p.* 362. *Sp. Pl.* 627. *Fl. Suecic. n.* 416.
MYOSOTIS caule ſimplici, foliis ovatis, hirſutis, tubis ternis. *Haller. hiſt. n.* 894.
CENTUNCULUS ſemidecander. *Scopoli. Fl. Carniol. n.* 549.
MYOSOTIS arvenſis hirſuta minor. *Vaillant. tab.* 30. *fig.* 2.
CERASTIUM hirſutum minus parvo flore. *Raii Syn. ed.* 3. *t.* XV. *fig.* 1. *Hudſon. ed.* 2. *p.*200. *Lightf. p.* 241.

RADIX annua, fibroſa, albida.

CAULIS in locis ſicciſſimis ſimplex, biuncialis, erectus; ſæpius vero ramoſus, aut pluribus cauliculis compoſitus, ſicut in icone exprimitur; primo vere cauliculi ſupra muros aut terram expanduntur, tandem ſuberecti, triunciales, aut etiam ſemipedales fiunt, colore purpuraſcente, et pilis glanduliferis veſtiti.

FOLIA radicalia oblongo-ovata, prope apicem dilatata, acuta, puncto rufo terminata, baſi anguſtata, connata, leviuſcula, medio per longitudinem ſulcata, caulina ovata, villoſa.

BRACTEÆ duæ, concavæ, viſcoſæ, membranâ marginatæ, ſub ſingulâ dichotomiâ caulis.

FLORES albi, pedunculati, ſubcorymboſi.

PEDUNCULI villoſi, ad baſin paululum incraſſati, floreſcente plantâ longitudine calycis, erecti; peractâ floreſcentiâ deorſum flectuntur, et duplo longiores evadunt, demum eriguntur.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, membranâ acuminatâ Corolla longiore terminatis, viſcoſis, *fig.* 1, 2.

COROLLA: PETALA quinque, oblonga, calyce breviora, apice acutè emarginata, ſæpe eroſa, *fig.* 3, 4.

STAMINA: FILAMENTA plerumque quinque, ſubinde ſex, raro plura, alba, Corollâ breviora: ANTHERÆ ſubrotundæ, flaveſcentes, *fig.* 5.

PISTILLUM: GERMEN ovatum: STYLI quinque, capillares, albi, villoſi: STIGMATA ſimplicia, *fig.* 6, 7.

PERICARPIUM: CAPSULA membranacea, ſcarioſa, quinquenervis, ore decemdentato, *fig.* 8.

SEMINA plurima, minima, ovata, flaveſcentia, *fig.* 9, 10.

ROOT annual, fibrous, of a whitiſh colour.

STALK in very dry places is ſimple, upright, and about two inches high; but more commonly is branched, or compoſed of numerous ſmall ſtalks, as expreſſed in the figure: theſe early in the ſpring, are expanded on the walls or earth, finally become nearly upright, three inches, or ſometimes even ſix inches high, of a purpliſh colour, and covered with hairs having glands at their extremities.

LEAVES near the root of an oblong oval ſhape, dilated near the top, terminating in a ſharp red point, narrower towards the baſe, and uniting around the ſtalk, nearly ſmooth, and grooved down the middle: thoſe of the ſtalk oval and villous.

FLORAL-LEAVES two, hollow, viſcous, and edged with a membrane, placed under each diviſion of the ſtalk.

FLOWERS white, ſtanding on foot-ſtalks, and forming a kind of Corymbus.

FLOWER-STALKS villous, and thickened a little at bottom, while the plant is in flower the length of the Calyx, and upright, the flowering over they are bent backward, and become twice as long, finally they again become upright.

CALYX: a PERIANTHIUM of five leaves, lanceolate, viſcous, and terminated by a pointed membrane, which is longer than the Corolla, *fig.* 1, 2.

COROLLA: five PETALS, which are oblong, and ſhorter than the Calyx, ſharply cut in at top, and often appearing jagged, *fig.* 3, 4.

STAMINA: FILAMENTS generally five, now and then ſix, ſeldom more, white, ſhorter than the Corolla: ANTHERÆ nearly round, of a yellowiſh colour, *fig.* 5.

PISTILLUM: GERMEN oval: STYLES five, very fine, white, and villous: STIGMATA ſimple, *fig.* 6, 7.

SEED-VESSEL, a membranous CAPSULE, ſonorous when touched, having five ribs, the mouth opening with ten teeth, *fig.* 8.

SEEDS numerous, very minute, oval and yellowiſh, *fig.* 9, 10.

MUCH praiſe is due to the great LINNÆUS, for the accuracy with which he has deſcribed the more common *Ceraſtiums*, and particularly the preſent ſpecies. To Monſieur VAILLANT the public are alſo much indebted, for the accurate and elegant figures, which he has given of them in his *Flora Pariſienſis*.

In the third edition of RAY's *Synopſis*, the *ſemidecandrum* is added by DILLENIUS, who has there given a figure of it, which, although expreſſive of the plant as it commonly grows on heaths, yet tends to miſlead the ſtudent with an idea, that minuteneſs is its chief characteriſtic: the deſcription alſo has a ſimilar tendency. It ſays, that the ſtalks are not viſcous, and that it flowers ſomewhat later than the *viſcoſum*; whereas in both, the ſtalks are evidently viſcous towards the upper part; the *ſemidecandrum* alſo flowers equally early; and inſtead of being leſs branched, as is there aſſerted, it is in a common way more ſo. It is true that both ſpecies, when they grow in very barren places, (and in which this ſpecies ſeems chiefly to have been ſought for,) have only a ſimple ſtalk, and often do not ariſe to the height of two inches.

The *ſemidecandrum* is a much more common plant than is generally imagined; and is diſtinguiſhed, particularly when in bloſſom, from all the other *Ceraſtiums* with the greateſt facility.

There is ſcarce a wall or heath around town, on which this plant may not be found in abundance; particularly about *Hackney*; as alſo under *Greenwich Park Wall*, facing *Black-heath*, as well as on the heath itſelf. It comes into bloſſom ſoon after the *Draba verna*, and, like that plant, ſoon diſappears.

It may be diſtinguiſhed from the *Ceraſtiums*, when in bloſſom, by having only five ſtamina, whence its name. I have ſometimes found more; but this number is ſufficiently conſtant to form a very good ſpecific character. LINNÆUS remarks its having ten ſtamina, five of which produce no Antheræ: theſe I muſt confeſs never to have ſeen. SCOPOLI obſerves, that he always found it with ten ſtamina, and attributes the want of Antheræ in LINNÆUS's five, to the five exterior ones quickly loſing their Antheræ. It is poſſible that in *Carniola*, this plant may occur with ten ſtamina; but here, like the *Alſine*, it certainly loſes one half of them.

The petals form a more invariable character, being always ſhorter than the calyx, acutely cut in at top, as if a piece had been taken out with a pair of ſciſſars, and frequently irregularly jagged or gnawed: they are alſo much broader than thoſe of the *Ceraſtium viſcoſum*.

The calyx too is often of conſiderable uſe in determining this ſpecies, (as it may be obſerved when neither the ſtamina or petals are viſible,) at leaſt from the *vulgatum*, its leaves being very thickly covered with hairs, having glands at their extremities, vid. *fig.* 1, 2. which glands are altogether wanting in the *vulgatum*. The membrane alſo, which terminates the leaves of the calyx, is remarkably long in this ſpecies.

Theſe circumſtances, if attended to, together with the remarks to be hereafter made on the *Ceraſtium vulgatum*, will, it is hoped, enable the ſtudent to inveſtigate theſe plants, and fix them with certainty.

No virtues are attributed to it: and it is too inconſiderable to be noxious in agriculture.

Cerastium semidecandrium

Cerastium vulgatum

Ceraſtium vulgatum. Common Mouſe-ear-Chickweed.

CERASTIUM *Linnæi. Gen. Pl.* DECANDRIA PENTAGYNIA.

Calyx 5-phyllus. *Petala* bifida. *Caps.* unilocularis, apice dehiſcens.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

CERASTIUM *vulgatum* foliis oblongo-ovatis, hirſutis, caulibus diffuſis, hirſutie nudâ.

CERASTIUM *vulgatum* foliis ovatis, petalis calyci æqualibus, caulibus diffuſis. *Lin. Syſt. Vegetab. p.* 362. *Sp. Pl. p.* 627. *Fl. Suecic. n.* 415.

MYOSOTIS foliis ovato lanceolatis, petalis calycis longitudine. *Haller. Hiſt. Helv. p.* 390. *n.* 893.

MYOSOTIS arvenſis hirſuta, parvo flore albo. *Vaillant. Paris.* 142. *t.* 30. *f.* 1.

ALSINE hirſuta magno flore. *Bauhin. pin.* 251.

AURICULA muris quorundam flore parvo, vaſculo tenui longo. *I. B.* III. 359.

ALSINE hirſuta myoſotis. *Adv.* 193. *Raii. Syn. p.* 349, Narrow-Leaved Mouſe-ear Chickweed.

Hudſon. Fl. Angl. p. 175. *ed.* 2. *p.* 200.

Ltghtfoot. Fl. Scot. p. 240.

RADIX perennis, fibroſa.

CAULES plurimi, diffuſi, teretes, purpuraſcentes, hirſuti, ramoſi.

FOLIA *hirſuta*, inferiora oblongo-ovata, baſi anguſtata, carinata, connata, ſuperiora ovata, marginibus ſubrevolutis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-lanceolatis, margine membranaceis, apice purpuraſcentibus, hirſutis, *hirſutie nudâ ſive glandulis deſtituta*, *fig.* 1.

COROLLA: PETALA quinque, alba, obtuſe bifida, calyce plerumque longiora, baſi flaveſcentia, *fig.* 2.

STAMINA: FILAMENTA decem, filiformia, corolla breviora; alterna breviora: ANTHERÆ ſubrotundæ, flavæ, *fig.* 3.

PISTILLUM: GERMEN ovatum: STYLI quinque, capillares, albi, ad baſin ſenſim tenuiores: STIGMATA ſimplicia, *fig.* 4.

PERICARPIUM: CAPSULA ovato-cylindracea, membranacea, paululum recurvata, calyce duplo fere longior, ore decemdentato.

SEMINA plurima, flaveſcentia, ad lentem ſcabriuſcula, *fig.* 5, 6.

ROOT perennial and fibrous.

STALKS numerous, ſpreading, round, purpliſh, hirſute, and branched.

LEAVES *hirſute*; the lowermoſt of an oblong oval ſhape, narrowed at the baſe, midrib projecting on the under ſide, uniting around the ſtalk; the uppermoſt leaves oval, the edges ſomewhat rolled back.

CALYX: a PERIANTHIUM of five leaves, which are oval and pointed, membranous at the edges, and purpliſh at top, *covered with hairs which have no glands at their extremities*, *fig.* 1.

COROLLA: five white PETALS, bluntly notched at top, generally longer than the calyx, yelloviſh at bottom, *fig.* 2.

STAMINA: ten FILAMENTS, thread-ſhaped, and ſhorter than the corolla; the alternate ones ſhorteſt; ANTHERÆ roundiſh, and yellow, *fig.* 3.

PISTILLUM: GERMEN roundiſh: STYLES five, very ſlender and white, gradually leſſening to the bottom: STIGMATA ſimple, *fig.* 4.

SEED-VESSEL: a CAPSULE ovally-cylindrical, membranous, turning up a little, almoſt twice the length of the calyx, the mouth opening with ten teeth.

SEEDS numerous, yelloviſh, appearing roughiſh when magnified, *fig.* 5, 6.

THE *Ceraſtium vulgatum* is often confounded with the two ſpecies already figured in this work; viz. the *viſcoſum* and *ſemidecandrum*. The attentive botaniſt will, however, readily diſtinguiſh it; particularly when aſſiſted by the following obſervations.

Firſt, this ſpecies is certainly perennial; and although it has only a ſmall fibrous root, it continues through the winter, and from the ſame root throws out new ſhoots; while the other two are ſtrictly annual. Secondly, the hairs on the ſtalks, leaves, and calyx, are much longer and coarſer, than in either of the other two; and what particularly deſerves to be noticed, they are not terminated at the extremity by a viſcous globule, a character alone ſufficient to diſtinguiſh it.—And thirdly, it is not only a larger and more ſpreading plant, but alſo with reſpect to ſituation more univerſally common.

It is ſubject to many variations; ſometimes being very hirſute, at other times but thinly covered with hairs; and it is ſaid to have been found by DODY quite ſmooth.† It differs in ſize from an inch to two feet. In the breadth of its leaves alſo, like the *Polygonum aviculare*, it varies very conſiderably. The bloſſoms likewiſe are ſubject to vary in ſize. In general, the ſtronger the plant the ſmaller the petals, and vice verſâ; hence by the ſize of its petals alone, it is ſufficiently diſtinguiſhed on heaths, where it frequently grows about two inches in height, and is often taken for the *ſemidecandrum*.

The name given to this plant by Monſieur VAILLANT, is certainly improper; the petals being often twice as large as either of the other two. There is one point alſo in which LINNÆUS's obſervation does not accord with ours: in comparing the leaves with thoſe of the *viſcoſum*, he ſays they are *minus lanceolata magiſque ovata*, the reverſe of which is generally obſervable in our plant.

It comes fully into bloom about May; but may be found in bloſſom during the whole of the ſummer. It grows not only on walls, but alſo by the ſides of roads, in meadows, and among rubbiſh. Like the other *Ceraſtiums*, it is not known to be particularly noxious in agriculture; nor has it any virtues to recommend it.

†*Raii Syn. ed.* 3. *p.* 349.

CERASTIUM VISCOSUM. BROAD-LEAVED MOUSE-EAR CHICKWEED.

CERASTIUM *Linnæi Gen. P.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* bifida. *Caps.* unilocularis apice dehiſcens.

Rai Syn. Gen. 24. HERBÆ PENTAPETALA VASCULIFERÆ.

CERASTIUM *viſcoſum* erectum villoſo-viſcoſum. *Linnæi Syſt. Vegetab. p.* 362. *Fl. Suecic. n.* 414.

MYOSOTIS hirſuta et viſcoſa. *Haller hiſt. n.* 895.

MYOSOTIS hirſuta altera viſcoſa. *Vaill. Paris.* 142. *t.* 30. *fig.* 1.

ALSINE hirſuta altera viſcoſa. *C. Bauhin. pin.* 251.

ALSINE viſcoſa. *Parkinſon.* 768.

ALSINE hirſuta Myoſotis latifolia præcocior. *Cat. angl.*

ALSINE Myoſotis humilior et rotundo folio. *Merret. pin.* The Broader-leaved Mouſe-ear Chickweed, *Raii Syn. p.* 348. *Hudſon. Fl. Angl. p.* 175.

RADIX annua.

CAULIS palmaris ad pedalem, baſi ramoſus, medius caulis erectus, laterales adſcendentes, dichotomus, pilis glanduliferis veſtitus, unde ſub viſcoſus evadit.

FOLIA ovata, ſubconnata, villoſo-viſcoſa, ad inferiorem partem caulis baſi anguſtiora, e flavo vireſcentia.

FLORES in ſummitatibus caulium plantâ adhuc infantili arcte ſtipantur, ad quindecem aut plures.

CALYX PERIANTHIUM pentaphyllum, foliolis ovato-acuminatis, longitudine petalorum, apice purpuraſcentibus, viſcoſo-piloſis, *fig.* 1.

COROLLA: PETALA quinque alba, oblonga, anguſta, baſi villoſa, apice bifida, *fig.* 2.

STAMINA: FILAMENTA decem, ſubulata, quorum quinque longiora, baſi glandulâ inſtructa, *fig.* 3, 6.

PISTILLUM: GERMEN ovatum: STYLI quinque villoſi germine breviores: STIGMATA obtuſiuſcula, *fig.* 4, 5.

PERICARPIUM: CAPSULA corniformis, ore decemdentato calyce dimidio longiore, *fig.* 7.

SEMINA plurima, flaveſcentia, ſuborbiculata, crenulata, *fig.* 8, 9.

ROOT annual.

STALK from three inches to a foot in height, branched at bottom, the middle ſtalk upright, the ſide ones bending upward, forked at top, covered with numerous hairs, each of which is terminated by a gland, whence it becomes ſlightly viſcid.

LEAVES oval, ſlightly connate, hoary with a little clammineſs, at the bottom of the ſtalk narrower at the baſe, of a yellowiſh green colour.

FLOWERS, while the plant is young, are cloſely crouded together on the tops of the ſtalks to the number of fifteen or more.

CALYX: a PERIANTHIUM of five leaves, which are of an oval pointed ſhape, the length of the petals, purpliſh at top, and covered with viſcid hairs, *fig.* 1.

COROLLA: five white PETALS, oblong, narrow, at bottom villous, bifid at top, *fig.* 2.

STAMINA: ten FILAMENTS, tapering, of which five are longer than the others, and furniſhed at bottom with a ſmall gland, *fig.* 3, 6.

PISTILLUM: GERMEN oval: STYLES five, villous, ſhorter than the germen: STIGMATA bluntiſh, *fig.* 4, 5.

SEED-VESSEL a CAPSULE, horn-ſhaped, twice the length of the calyx, the mouth furniſhed with ten teeth, *fig.* 7.

SEEDS ſeveral, yellowiſh, roundiſh, and notched, *fig.* 8, 9.

AMONG the plants which are with difficulty diſtinguiſhed by the young Botaniſt, we may properly reckon three of our common *Ceraſtiums*, viz. the *viſcoſum*, *vulgatum*, and *ſemidecandrium*, as all of them have ſome ſimilarity in their appearance, occur frequently in the ſame ſituations, and are ſubject to be much altered in their appearance, according to the ſoil and ſituation in which they grow.

The figure which is here given of the *viſcoſum*, repreſents that plant in its medium ſtate; on walls it is found much ſmaller; in meadows it is found much larger; and in both theſe ſituations, as well as on dry banks and ant hills, it occurs very plentifully, and flowers in the months of April and May, being one of the earlieſt in bloom.

It is diſtinguiſhed from the others by the upright manner of its growing, by its broad hoary leaves, the narrowneſs of its petals, and the crouded or cluſtered appearance of its flowers before they blow: its leaves alſo in general are of a paler colour than the reſt.

It is not remarked for any particular uſe; neither is it noxious to the Farmer or Gardener.

LINNÆUS obſerves that the plant is liable to be much disfigured by a ſpecies of *Chermes*.


Cerastium viscosum
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GEUM URBANUM. COMMON AVENS.

GEUM *Linnæi Gen. Pl.* ICOSANDRIA POLYGYNIA.

Cal. 10-fidus. *Petala* 5. *Sem.* ariſta geniculatâ.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

GEUM *urbanum* floribus erectis, fructibus globoſis villoſis: ariſtis uncinatis nudis, foliis lyratis.

Linnæi Syſt. Vegetab. p. 399. *Sp. Pl. p.* 716. *Fl. Suecic. p.* 179.

GEUM foliis pinnatis, pinna ultimâ trilobata; floribus patulis, tubis aduncis. *Haller hiſt. n.* 1130.

CARYOPHYLLATA urbana. *Scopoli Fl. Carniol. p.* 364.

CARYOPHYLLATA vulgaris. *Bauhin pin.* 321.

CARYOPHYLLATA *Gerard emac.* 995. *Parkinſon* 136.

Raii Syn. Avens, Herb Bennet.

Hudſon. Fl. Angl. p. 198.

Lightfoot Fl. Scot. p. 273.

RADIX perennis, fibroſa, fuſca, ſapore et odore aromatico Caryophyllorum.

ROOT perennial, fibrous, of a brown colour, with the aromatic taſte and ſmell of Cloves.

CAULES plures, pedales aut bipedales, ſuberecti, parum flexuoſi, ſubanguloſi, hirſutuli, ramoſi.

STALKS ſeveral, from one to two feet high, nearly upright, a little crooked, ſlightly angular, hairy, and branched.

FOLIA radicalia admodum variantia, plerumque vero pinnata, petiolata, vagina petiolorum ciliata, pinnâ extimâ magnâ, trilobatâ aut tripartitâ pinnis lateralibus paucis, parvis, inæqualibus, omnibus inciſo-ſerratis, venoſis, hirſutulis, caulina tripartita aut terna.

LEAVES: radical leaves varying very much, moſt commonly pinnated, and ſtanding on a foot-ſtalk, the ſheath of which is edged with hairs, the outermoſt leaf or pinna large, divided a little way down the leaf, or nearly to the baſe; the lateral leaves few, ſmall and unequal, all of them deeply ſerrated, veined, and hairy; the leaves of the ſtalk deeply divided into three ſegments, or entire leaves.

STIPULÆ duæ, magnæ, ſubrotundæ, foliis ſimiles.

STIPULÆ two, large, of a roundiſh figure like the leaves.

PEDUNCULI ſolitarii, ſuberecti, teretes, hirſutuli.

FLOWER-STAKS ſingle, nearly upright, round and hairy.

CALYX: PERIANTHIUM monophyllum, decemfidum, patens, laciniis alternis minimis, acutis, hirſutis, demum reflexis; laciniis majoribus interne villoſis, margine craſſis, *fig.* 1.

CALYX: a PERIANTHIUM of one leaf, divided into ten ſegments, and ſpreading; the alternate ſegments very minute, pointed, hirſute, finally turning back; the larger ſegments villous on the inſide, and thick at the edge, *fig.* 1.

COROLLA: PETALA quinque rotunda, flava, longitudine calycis, remota, unguibus breviſſimis, *fig.* 2.

COROLLA: five roundiſh yellow PETALS, the length of the Calyx, at a little diſtance from each other, having very ſhort claws, *fig.* 2.

STAMINA: FILAMENTA plurima, flaveſcentia, ſubulata, calyci affixa, primum inflexa, demum erecta: ANTHERÆ ſubrotundæ, flavæ, demum fuſcæ, *fig.* 3, 4.

STAMINA: FILAMENTS numerous, of a yellowiſh colour, tapering, affixed to the Calyx, at firſt bending inward, laſtly becoming upright: ANTHERÆ roundiſh, of a yellow colour, finally brown, *fig.* 3, 4.

PISTILLUM: GERMINA numeroſa, in capitulum collecta, piloſa: STYLUS medio geniculatus, apice paululum incraſſato: STIGMA ſimplex, *fig.* 5.

PISTILLUM: GERMINA numerous, collected into a head, hairy: STYLE jointed in the middle, a little thickened at top: STIGMA ſimple, *fig.* 5.

SEMINA numeroſa, compreſſa, hiſpida, Stylo longo geniculato ariſtata, *fig.* 6, receptaculo paleaceo inſidentia, *fig.* 7.

SEEDS numerous, flattened, hiſpid, terminated by a long Ariſta, crooked near the extremity, *fig.* 6, ſeated on a hairy receptacle, *fig.* 7.

THE *Geum urbanum* is a very common plant with us, in woods and hedges, flowering from May to September.

The root poſſeſſes a degree of aſtringency, joined to an aromatic flavour like that of Cloves, whence its name of *Caryophyllata.*

Infuſed in beer, it renders it more fragrant, and prevents it from ſoon turning ſour; *Linnæi Fl. Suecic.*

Chewed in the mouth, it takes off from a diſagreeable breath; *Rutty. Mat. Med.*

An infuſion of the root in water, given in malignant fevers, has been attended with bad effects, producing delirium: but an infuſion of the root in wine, ſtrengthens the ſtomach and bowels, and is ſerviceable in the diarrhœa and dyſentery, wounds, chronic diſeaſes ariſing from a laxity of fibre, and intermitting fevers; *Haller hiſt. p.* 53. t. 2.

The root is ſaid to poſſeſs the moſt virtue when it grows in a dry ſituation.

It is eaten by Kine, Goats, Sheep, and Swine; but not readily by Horſes.

It is diſtinguiſhed from our other *Geum* by its yellow flowers.

№ 113.

Geum urbanum.

ADONIS AUTUMNALIS. PHEASANTS-EYE.

ADONIS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* quinis plura abſque nectario. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ADONIS *autumnalis* floribus octopetalis, fructibus ſubcylindricis. *Linnæi Syſt. Vegetab. p.* 427. *Sp. Pl. p.* 771.

ADONIS radice annua, flore octopetalo. *Haller hiſt. n.* 1158.

ADONIS *autumnalis. Scopoli Flor. Carniol. n.* 677.

ADONIS hortenſis, flore minore atrorubente. *Bauhin Pin.* 178.

FLOS ADONIS *Parkinſon Parad.* 293.

FLOS ADONIS flore rubro. *Gerard emac.* 387. *Raii Syn.* 251, Adonis Flower, Red Maithes. *Hudſon Fl. Angl. ed.* 2. *p.* 239.

RADIX annua, craſſitie digiti minimi, fuſiformis, paucis fibrillis inſtructa.

ROOT annual, the thickneſs of the little finger, tapering, furniſhed with few fibres.

CAULIS pedalis, erectus, ſubangulatus, fiſtuloſus, purpuraſcens, villoſus, ad baſin uſque ramoſus.

STALK about a foot high, upright, ſomewhat angular, hollow, purpliſh, hoary, branched quite to the bottom.

RAMI plurimi, ſparſi, cauli ſimiles, erecti, caulem primo florentem plerumque ſuperantes.

BRANCHES numerous, placed irregularly on the ſtalk, which they reſemble, upright, and general'y taller than the ſtalk producing the firſt flower.

FOLIA alterna, e flavo viridia, infima petiolata, ſuprema ſeſſilia, pinnata, pinnis multifidis, capillaribus, acutis, ſubtus nitidis.

LEAVES alternate, of a yellowiſh green colour; the lower ones ſtanding on foot-ſtalks; the upper ones ſeſſile, pinnated; the pinnæ divided into numerous capillary ſegments, pointed, and ſhining on the under ſide.

CALYX: PERIANTHIUM pentaphyllum, foliolis ſubovatis, obtuſis, inæqualibus, concavis, purpureis, deciduis, corolla brevioribus, apicibus dentato-eroſis, *fig.* 1, 2.

CALYX: a PERIANTHIUM of five leaves, which are ſomewhat oval, obtuſe, unequal, hollow, purple, deciduous, ſhorter than the corolla, the tips appearing as if bitten, *fig.* 1. 2.

COROLLA: PETALO octo, raro plura, ſæpe pauciora, inæqualia, obcordata, coccinea, apice eroſa, baſi interne nigra, externe viridante, *fig.* 3, 4.

COROLLA: eight PETALS, ſeldom more, oftener fewer, unequal, inverſely heart-ſhaped, ſcarlet, the tip irregularly notched, the bottom internally black, externally greeniſh, *fig.* 3, 4.

STAMINA: FILAMENTA plurima, quadraginta circiter, filiformia, alba; ANTHERÆ ovatæ, obtuſæ, incurvatæ, compreſſæ, atropurpureæ: POLLEN croceum, *fig.* 5.

STAMINA: FILAMENTS numerous, about forty, thread-ſhaped, and white: ANTHERÆ oval, obtuſe, bending inward, flattened, of a blackiſh purple colour: POLLEN of a ſaffron colour, *fig.* 5.

PISTILLUM: GERMINA plurima, in capitulum breve ſubconicum imbricatim congeſta, erecta: STIGMATA acuta reflexa, *fig.* 6, 7.

PISTILLUM: GERMINA numerous, upright, collected one over another into a ſhort head, ſomewhat conical: STIGMATA pointed, the points turned back, *fig.* 6, 7.

SEMINA ſubangulata, acuta, reticulato-rugoſa.

SEEDS ſomewhat angular, pointed, with a kind of network wrinkled appearance.

THE *Pheaſants-eye* has a peculiar claim to an inſertion in the *Flora Londinenſis*, as it is one of thoſe plants which are annually cried about our ſtreets, under the name of *red Morocco*: it may nevertheleſs be doubted, whether it has not originally been conveyed from the garden to the dungheap, and from thence become an ornamental annual weed in many of the corn-fields in Kent, and other Counties adjacent to London, in which it ſeems as much at home, as the *Ranunculus arvenſis*, or *Corn Crowfoot*.

There is no plant more variable in its Petals, both with reſpect to number and ſize; they therefore form a bad ſpecific character.

It flowers in May, and the ſeed is ripe in June; hence there appears an evident impropriety in calling this ſpecies *autumnalis*: it will moſt probably be found, that the *autumnalis* and *æſtivalis* are the ſame.

In the gardens, (where it is common,) it uſually flowers through great part of the Summer.

ANEMONE NEMOROSA. WOOD ANEMONY.

ANEMONE *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.
Cal. 0. *Petala* 6-9. *Sem.* plura.
Raii Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

ANEMONE *Nemoroſa* ſeminibus acutis, foliolis inciſis, caule unifloro. *Linnæi. Syſt. Vegetab. p.* 425. *Flora Suecic. p.* 190.

ANEMONE ſeminibus nudis, caule unifloro, foliis radicalibus nullis, caulinis quinque-partitis, lobis tripartitis inciſis. *Haller. Hiſt. Helv.* 2. *p.* 64.

ANEMONE *Nemoroſa. Scopoli Fl. Carniol. p.* 383. *n.* 660.

ANEMONE ſylveſtris alba major. *Bauhin Pin.* 176.

ANEMONE nemorum alba. *Gerard emac.* 383.

RANUNCULUS nemoroſus albus ſimplex. *Parkinſon.* 325. *Raii Syn.* 259, Wood Anemony. *Hudſon Fl. Angl.* 208. *Oeder Fl. Dan. tab.* 549.

RADIX teres, per terram oblique repens, craſſitie pennæ coracis, externe caſtanea, intus alba, fragilis, fibrillis fuſcis prædita.

ROOT round, creeping obliquely under the ſurface of the earth, the thickneſs of a crow quill, externally cheſnut colour'd, internally white, brittle, furniſhed with brown fibres.

CAULIS teres, ſimplex, triuncialis circiter, purpuraſcens, pilis mollibus veſtitus, trifoliatus.

STALK round, ſimple, about three inches high, purpliſh, covered with ſoft hairs, and bearing three leaves.

FOLIA terna, ſubtus hirſutula, tripartita, lobis inciſis, lateralibus fere uſque ad baſin diviſis.

LEAVES growing three together, ſlightly hairy underneath, formed of three ſegments; the ſide lobes divided nearly down to the baſe.

PETIOLI breves, vaginantes.

FOOT-STALKS of the leaves ſhort, and forming a kind of ſheath.

SCAPUS uniflorus, nutans.

FLOWER-STALK ſupporting one flower, and drooping at top.

CALYX nullus.

CALYX wanting.

COROLLA: PETALA ſex aut ſeptem, oblongo-ovata, alba, ſubtus incarnata, patentia, ſubemarginata, *fig.* 1.

COROLLA: ſix or ſeven PETALS, of an oblong oval ſhape, white, underneath purpliſh, ſpreading, ſlightly notched in at top, *fig.* 1.

STAMINA: FILAMENTA numeroſa, inæqualia, capillaria, filiformia, alba: ANTHERÆ flavæ ſubrotundæ, biloculares, compreſſæ: POLLEN album, *fig.* 2, 3.

STAMINA: FILAMENTS numerous, unequal, very ſmall, thread ſhaped and white: ANTHERÆ yellow, roundiſh, of two cavities, flattiſh, POLLEN white, *fig.* 2, 3.

PISTILLUM: GERMINA in capitulum collecta, ovata, villoſa: STYLI ſubulati, incurvati: STIGMA ſimplex, *fig.* 4, 5.

PISTILLUM: GERMINA collected into a little head, oval, villous: STYLES tapering and bending downwards: STIGMA ſimple, *fig.* 4, 5.

SEMINA plurima, nuda, oblonga, hirſuta, mucrone incurvo, *fig.* 6, 7, auct.

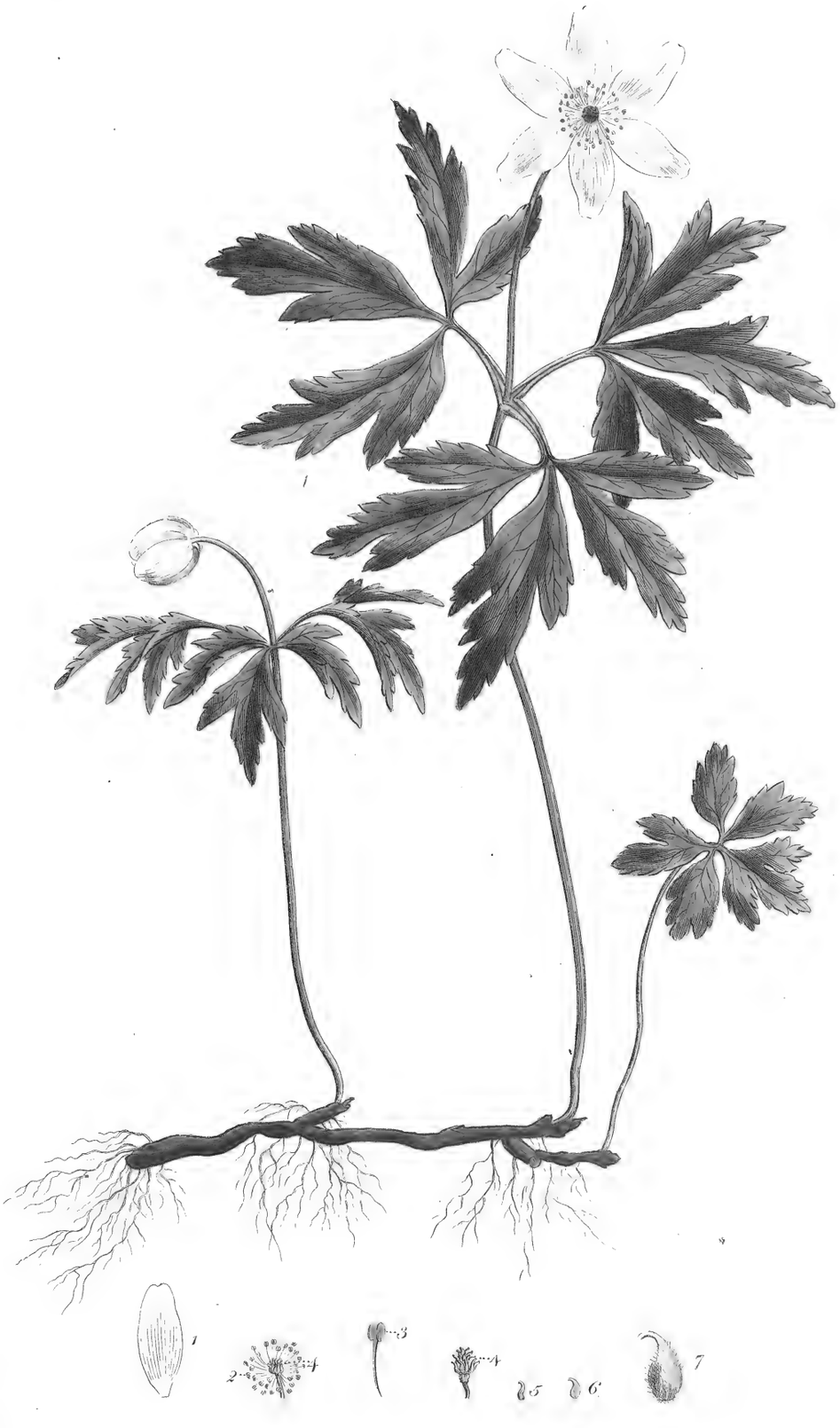
SEEDS ſeveral, naked, oblong, hairy, the top bending downwards, *fig.* 6, 7, magnified.

FROM the obſervations of ſeveral Authors, the *Wood Anemone* may be conſidered as a poiſonous plant. According to LINNÆUS, Cattle which have been brought from open to woody paſtures, and have eaten of this plant, have been affected with the bloody Flux, and have made bloody Urine. HALLER informs us, that in *Kamtſchatka*, the inhabitants are ſaid to poiſon their Arrows with a ſpecies of *Anemone*, the wounds from which produce certain death.

The *Wood Anemone* produces its flowers early in the Spring. In moſt of our Woods the ground is nearly covered with them, in the months of April and May. In fine clear weather the bloſſoms are expanded, and become ſo erect as to face the ſun; but in the evening, and in wet weather, they are cloſed and hang down, whereby the delicate parts of the flower are ſecured from injury.

The chief variation obſerved in it, is the colour of its Petals, which are ſometimes quite white: and according to MERRET, they occur in *Devonſhire* wholly red: both ſorts, particularly when double, are cultivated by the Gardeners: and were the ſame pains to be taken with it, as with ſome of our foreign *Anemonies*, it might probably be very much improved in the eye of the Floriſt.

The leaves of divers plants, particularly the *Euphorbia Helioſcopia*, are ſubject to be covered with ſmall yellow dots, the effects of ſome Inſect: this alſo ſometimes happens to the *Wood Anemone*. In C. BAUHINE, we find it mentioned under the name of *Anemone nemoroſa ſterilis foliis punctatis*. This variety is ſomewhat unfortunately figured in DILLENIUS's edition of RAY's *Synopſis*, and deſcribed as a Fern, to which it certainly has no pretenſions, as is evident from the irregularity of its dots.



Anemone nemorosa.

Ranunculus Ficaria

RANUNCULUS *FICARIA*. PILEWORT.

RANUNCULUS *Linnæi Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Cor.* 5-petala. *Sem.* plurim. *Petala* ungue nectarifero.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *Ficaria* foliis cordatis angulatis petiolatis. *Linnæi Syſt. Vegetab. p.* 428. *Fl. Suecic. p.* 193.

FICARIA *Haller hiſt. helv. n.* 1160. *Hudſon Fl. Angl. p.* 213.

RANUNCULUS *Ficaria. Scopoli Fl. Carniol. p.* 395.

CHELIDONIA rotundifolia minor. *Bauhin Pin.* 309.

CHELIDONIUM minus. *Gerard emac.* 816. *Parkinſon* 617. *Raii Syn.* 246, Pilewort or the leſſer Celandine. *Oeder Fl. Dan. icon.* 469.

RADIX tuberoſa, tuberibus numeroſis, congeſtis, pallidis, ſubpyriformibus, modo brevibus, modo longe protenſis; e ſummo tuberum oriuntur fibrillæ plurimæ.

CAULES plures, palmares et ultra, teneri, glabri, ad baſin rubri, ramoſi, decumbentes, nonnunquam etiam repentes, bulbillis in axillis foliorum radicantibus.

FOLIA *radicalia* ſubrotundo-cordata, variantia, longe petiolata, maculis albis interdum notata, glabra, venis ſuperne impreſſis, ſubcrenata, *caulina* ſubtriangularia, anguloſa.

PEDUNCULI uniflori, ſulcati, peractâ floreſcentiâ recurvati.

CALYX: PERIANTHIUM triphyllum foliolis concavis, deciduis, baſi ſua caulem amplectentibus, *fig.* 1.

COROLLA: PETALA plerumque octo, quoad formam valde variantia, plerumque vero ovato-lanceolata, lutea, nitida, *fig.* 2, 3.

STAMINA: FILAMENTA numeroſa; ANTHERÆ flavæ, oblongæ, compreſſæ, *fig.* 6, 7.

PISTILLUM: GERMINA numeroſa, in capitulum collecta; STIGMATA parva, *fig.* 8.

SEMINA plurima ſubovata ſæpius abortiva, *fig.* 9.

NECTARIUM ſquamula ad baſin petalorum, *fig.* 4, 5.

ROOT tuberous, the knobs or bulbs numerous, crouded, of a pale colour, ſomewhat pear-ſhaped, ſometimes ſhort, ſometimes extended to a conſiderable length; from the top of them ariſe many ſmall fibrous roots.

STALKS numerous, four inches or more in length, tender, ſmooth, red at bottom, branched, decumbent, ſometimes even creeping, from little bulbs in the boſoms of the leaves taking root.

LEAVES *next the root* of a roundiſh heart-ſhaped figure, variable, ſtanding on long foot-ſtalks, ſometimes ſpotted with white, ſmooth and ſhining; the veins on the upper ſide of the leaf preſſed in, differently notched in different leaves; thoſe of the ſtalk triangular with an angular margin.

FOOT-STALKS of the flowers, ſuſtaining one flower on each, grooved, when the bloſſom is fallen bending backwards.

CALYX: a PERIANTHIUM of three leaves, which are hollow and deciduous, and embrace the top of the ſtalk, *fig.* 1.

COROLLA: generally eight PETALS, which vary exceedingly in their form, moſt commonly of an oval-pointed ſhape, yellow and ſhining, *fig.* 2, 3.

STAMINA: FILAMENTS numerous; ANTHERÆ yellow, oblong and flat, *fig.* 6, 7.

PISTILLUM: GERMINA numerous, forming a little head; STIGMATA very ſmall, *fig.* 8.

SEEDS numerous, ſomewhat oval, moſt commonly abortive, *fig.* 9.

NECTARY a little ſcale at the baſe of the petals, *fig.* 4, 5.

BOTANISTS ſeem very much divided in their opinions reſpecting the genus of this plant, ſome making it a *Ranunculus*, others a genus diſtinct from it. Thoſe who object to its being a *Ranunculus* urge its not having the characters of that genus; that the Calyx, inſtead of having five leaves, has only three, while the Petals are more numerous than in the *Crowfoots*: this is granted: but is a deficiency in, or an addition to any of the parts of the fructification, a ſufficient reaſon for founding a new Genus? I ſhould apprehend not; for ſuch inſtances we meet with in plants almoſt every day: habit and peculiar characteriſtics are more to be attended to: and in this caſe, its gloſſy Petals, with its ſquamula or ſcale at the baſe of each; its grooved peduncles joined to its general appearance, ſeem fully to juſtify the great reformer of Botany in making it a *Ranunculus*.

Although the Calyx in general has only three leaves, it ſometimes occurs with four and five.

As the *Pilewort* blows earlier than any of our other *Crowfoots*, it is liable to have its parts of fructification injured by the inclemency of the weather, to ſecure it from which, it has a power of cloſing it Petals in a much greater degree than the others, and in this ſtate we uſually find it in the mornings and evenings, and in wet weather; and may not nature to produce this effect deviate from the uſual ſtructure of the flowers of this genus? Is not the Calyx by being in three leaves ſtronger than if it had been in five? And will not the Petals by being more numerous make leſs reſiſtance to the cloſing power of the Calyx?

In its firſt appearance in the Spring, this plant is ſmall and extends but little; but in the month of May, particularly by the ſides of moiſt ditches, it grows much more luxuriantly, and in this ſtate, ſmall bulbs, like grains of wheat, are obſervable in the boſoms of the leaves, which, as the ſtalks lie on the ground, get into the earth, and become the tuberous roots of young plants: this proviſion of nature for its encreaſe, ſeems the more neceſſary, as it is but ſeldom that its ſeeds come to perfection. Now and then a head with perfect ſeeds is obſervable, and when the plant ſtands ſingly, the ſtalk ſupporting them bends towards the ground, ſo that the ſeeds may inſinuate themſelves: thus nature appears to have been abundantly careful in its preſervation.

The Roots, like thoſe of the *Orchis* and other bulbous plants, are renewed every year.

In ſome Meadows, Paſtures and Orchards, it very much abounds, to the excluſion of more uſeful plants: as Cattle do not appear to eat it, it would be good huſbandry to dig it up, and ſow the ground with ſuch plants as are more beneficial.

The particular form of its roots ſeems firſt to have introduced it as a medicine for the Piles, in which diſorder, like many other remedies more rationally recommended, it may palliate, but will ſcarcely effect a cure.

It is cultivated in Gardens with a double flower.

Ranunculus hirsutus.

1 2 3 4 5 6

RANUNCULUS HIRSUTUS. PALE-LEAVED CROWFOOT.

RANUNCULUS *hirſutus* radice fibroſa annua, caule hirſuto, calycibus papilloſo-hiſpidis acuminatis, demum reflexis.

RANUNCULUS rectus foliis pallidioribus hirſutus. *J. Bauhin.* III. 417. *Raii Syn. p.* 247, Upright pale-leaved Crowfoot. *Raii Hiſt. Plant. p.* 582.

FROM having repeatedly obſerved, and carefully cultivated this plant, I find it to be perfectly diſtinct from the *bulboſus*, of which it is made a variety by ſome authors; 'though RAY and BAUHINE long ſince conſidered it as diſtinct.

As its ſtiff hairs are one of its characteriſtics, and conſtitute a part of its name in BAUHINE, I have made that its trivial name; and ſhall by way of contraſt, enumerate the ſeveral particulars in which it differs from the *bulboſus*, to which in its general appearance it is nearly allied.

The root of the *bulboſus*, which forms one of the chief characters of that plant, is round and ſolid like a ſmall turnip, remaining in the ground from year to year, and annually ſending up new flowering ſtems: the root of the *hirſutus* on the contrary is ſimply fibrous and annual.

The ſtalk of the *hirſutus* is generally more branched and ſpreading, producing a greater number of flowers, and covered with ſtiffer and longer hairs, than in the *bulboſus:* the hairs indeed in the latter plant are more numerous and ſoft, approaching to pubeſcence or downineſs, while in the former they are more rigid, or approaching to hiſpidity. The foot-ſtalks of the bottom leaves in the *hirſutus* are hollow, and if cut aſunder, the nerves appear projecting into the inſide of the tube; the leaves themſelves are more perfectly trilobate than in the *bulboſus*; the middle and outermoſt lobe rounder, and leſs deeply divided at the edges. From the inner edge of each of the two ſide lobes a bit appears as if cut away. Theſe leaves are frequently of a white or pale colour, in irregular ſpots, not unlike what we ſometimes meet with in the *Ranunculus Ficaria*; and the upper ſurface is full of little projecting points, from whence the hairs iſſue.

We come now to a character which this plant has in common with the *bulboſus*, viz. its reflexed calyx: this has been the cauſe of its having been conſidered by moſt botaniſts as the *bulboſus:* not finding in LINNÆUS any other *Ranunculus* with a reflexed calyx, without any farther examination they concluded this to be the ſame. But although the calyx when turned back reſembles that of the *bulboſus*, yet before the opening of the flower it is eſſentially different, being much more pointed, or as if it had been ſqueezed to a point with the fingers; and the outſide of it is very viſibly covered with little papillæ or projecting points, from whence the hairs proceed.

The flowers of this plant, as well as the ſeed, are alſo ſmaller than thoſe of the *bulboſus*.

Such are the characters whereby theſe two plants may with attention be diſtinguiſhed.

Nor do they differ leſs in their places of growth and times of flowering. The *bulboſus* grows in dry paſtures, and flowers in the month of May. The *hirſutus* flouriſhes more by the ſides of roads, in gardens, and rubbiſh, flowering from June to the end of the year.

I have obſerved this plant growing in great plenty by the ſide of the road betwixt *Croydon* and *Mitcham*; and I remember to have ſeen it near *Graveſend*; and plentifully by the ſea-ſide; on the gravelly banks about *Southampton*; alſo in various places near *London:* and there is no doubt but it is a much more common plant than botaniſts may imagine.

No particular uſes have been attributed to it.

RANUNCULUS AURICOMUS. WOOD CROWFOOT.

RANUNCULUS *Linnæi Gen. pl.* POLYANDRIA POLYGYNIA. *Cal.* 5 phyllus. *Petala* 5 infra ungues poro mellifero. *Sem.* nuda.

Raii Syn. Gn. 15 HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *auricomus* foliis radicalibus ſubreniformibus, tripartitis, acute crenatis, caulinis digitatis linearibus.

RANUNCULUS *auricomus* foliis radicalibus reniformibus crenatis inciſis, caulinis digitatis linearibus, caule multifloro. *Linnæi Syſt. Vegetab. p.* 429. *Fl. Suecic.* 194.

RANUNCULUS foliis radicalibus integris et ſemitrilobatis rotunde crenatis, caulinis multipartitis linearibus integerrimis. *Haller. hiſt. n.* 1177.

RANUNCULUS *auricomus. Scopoli Fl. Carn. n.* 687.

RANUNCULUS nemoroſus vel ſylvaticus folio rotundo *Bauhin pin.* 178.

RANUNCULUS *auricomus Ger. emac.* 954.

RANUNCULUS nemoroſus dulcis ſecundus Tragi *Parkinſon* 326. *Fuſchii Icon.* 156. *opt. Raii Syn. p.* 248. Sweet Crowfoot or Goldilocks. *Hudſon. Fl. Angl. p.* 211.

RADIX perennis, ſubpræmorſa, mitis, ſapore ſubdulci Glycyrrhizæ accedenti, fibris multis capillaribus inſtructa.

CAULIS pedalis, erectus, dichotomus aut trichotomus, teres, glaber, baſi purpureus.

FOLIA lævia, radicalia petiolis longis inſidentia, ſubreniformia, mire variantia, integra, tripartita aut etiam quinquepartita, plerumque vero tripartita lobis acute crenatis, caulina inferiora pedata, lobis latis, tripartitis aut quadripartis, dentatis, ſuperiora ſeſſilia, linearia, ſubintegerrima, amplexicaulia.

PETIOLI teretes, pubeſcentes.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, flaveſcentibus, patentibus *fig.* 1.

COROLLA: PETALA quinque, ſubrotunda, flava; unguibus parvis. *fig.* 2.

NECTARIUM: fovea ſine ſquamulâ ad baſin petalorum, ſupra ungues.

STAMINA: FILAMENTA plurima, baſi anguſtiora; ANTHERÆ oblongæ, flavæ, compreſſæ, incurvatæ; duas aut tres vidi connatas. *fig.* 3. 5. auct.

PISTILLUM: GERMINA numeroſa in capitulum collecta; STIGMATA reflexa, minima. *fig.* 4.

SEMINA fuſca, compreſſa, apicibus reflexis. *fig.* 6.

ROOT perennial, ſomewhat ſtumped, mild, with a taſte ſomewhat reſembling liquorice, furniſhed with many ſmall fibres.

STALK about a foot high, upright, dividing into two or three branches, round, ſmooth and purpliſh at bottom.

LEAVES at the bottom of the ſtalk ſmooth, ſitting on long footſtalks, ſomewhat kidney ſhaped, varying exceedingly, being ſometimes entire, ſometimes divided into three, or even five lobes, but moſt commonly tripartite; the lobes acutely crenated; the leaves towards the bottom divided nearly to the baſe, with three or four ſegments, indented; the uppermoſt leaves ſeſſile, linear, almoſt entire, and embracing the ſtalk,

FOOT-STALKS of the leaves round and pubeſcent.

CALYX: a PERIANTHIUM of five leaves, the leaves oval, concave, yellowiſh, and ſpreading. *fig.* 1.

COROLLA five roundiſh yellow petals, with ſmall ungues or claws, *fig.* 2.

NECTARY: a depreſſion without any ſcale, at the bottom of the petals above the Claws.

STAMINA: FILAMENTS numerous, narrow at bottom; ANTHERÆ oblong, yellow, flattened, and incurvated. I obſerved two or three growing together. *fig.* 3. 5. magnified.

PISTILLUM: GERMINA numerous, collected into a little head; STIGMATA ſmall and reflexed. *fig.* 4.

SEEDS brown, flat with a reflexed point. *fig.* 6.

Diſtinguiſhed from the other *Crowfoots* by its growing in Woods; (though I have ſometimes found it in boggy meadows,) by its Calyx being nearly as yellow as its petals, and not turning back as in the *bulboſus*; the *Nectary* at the bottom of the petals *a ſmall oblique hole* running downwards, not cover'd with any ſquamula; the bottom leaves of the plant more entire, and thoſe at the top narrower than in moſt of the other Crowfoots; the footſtalks of the flowers not grooved; the Petals often wanting, particularly when cultivated in Gardens, or not ſheltered by Trees.

It flowers in April and May; and is not particularly diſtinguiſhed for its Uſes or Beauty.

Ranunculus Auricomus.

RANUNCULUS SCELERATUS. CELERY-LEAV'D CROWFOOT.

RANUNCULUS *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *ſceleratus* foliis inferioribus palmatis; ſummis digitatis, fructibus oblongis. *Lin. Syſt. Vegetab. p.* 429. *Sp. Pl. p.* 776. *Fl. Suecic. p.* 194. *n.* 499.

RANUNCULUS foliis levibus, ſemitrilobatis, rotunde ſerratis, fructu ovato. *Haller hiſt. p.* 74. *n*, 1175.

RANUNCULUS *ſceleratus. Scopoli Fl. Carniol. n.* 688.

RANUNCULUS paluſtris apii folio lævis. *Bauhin. pin.* 180.

RANUNCULUS paluſtris rotundifolius. *Ger. emac.* 962.

RANUNCULUS paluſtris ſardonia lævis. *Parkinſon.* 1215. *Raii Syn. p.* 249. Round-leaved Water Crowfoot.

Hudſon Fl. Angl. p. 212.

Oeder Dan. icon. 570.

Lightfoot Fl. Scot. p. 291. Celery-leaved Crowfoot.

RADIX annua, fibroſiſſima, fibris albidis.

CAULIS erectus, pedalis ad bipedalem, inſigniter craſſus, fiſtuloſus, lævis, ramoſus.

FOLIA radicalia longe petiolata, nitida, ſubcarnoſa, trilobata, lobis trifidis rotunde crenatis; caulina ſubſeſſilia, palmata; ſuprema elliptica.

FLORES exigui, flavi.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, flaveſcentibus, deciduis, *fig.* 1.

COROLLA: PETALA quinque, parva, ovata, flava, nitida, magnitudine calycis, decidua, *fig.* 2.

NECTARIUM: Fovea marginata, ad baſin cujuſvis petali, *fig.* 3.

STAMINA: FILAMENTA plurima, raro ultra viginti, baſi tenuiora: ANTHERÆ flavæ, compreſſæ, biloculares, *fig.* 5.

PISTILLUM: GERMINA numeroſa, in capitulum oblongum, collecta: STIGMATA minima, germinibus inſidentia.

SEMINA plurima, compreſſa, ovato-acuminata, parva, receptaculo oblongo affixa, *fig.* 6.

ROOT annual, exceedingly fibrous, the fibres whitiſh.

STALK upright, from one to two feet high, remarkably thick, hollow, ſmooth, and branched.

LEAVES: radical leaves ſitting on long foot-ſtalks, ſhining, ſomewhat fleſhy, divided into three lobes; the lobes trifid, and roundly notched; ſtalk-leaves nearly ſeſſile, and palmated; uppermoſt leaves elliptical.

FLOWERS ſmall and yellow.

CALYX: a PERIANTHIUM of five leaves, the leaves oval, hollow, yellowiſh and deciduous, *fig.* 1.

COROLLA: five ſmall, oval, yellow, ſhining PETALS, the ſize of the Calyx, and deciduous, *fig.* 2.

NECTARY, a depreſſion or pore at the baſe of each Petal, ſurrounded by a prominent margin, *fig.* 3.

STAMINA: FILAMENTS numerous, ſeldom more than twenty, ſlender at bottom: ANTHERÆ yellow, flat and bilocular, *fig.* 5.

PISTILLUM: GERMINA numerous, collected together into an oblong head: STIGMATA very minute, ſitting on the Germina.

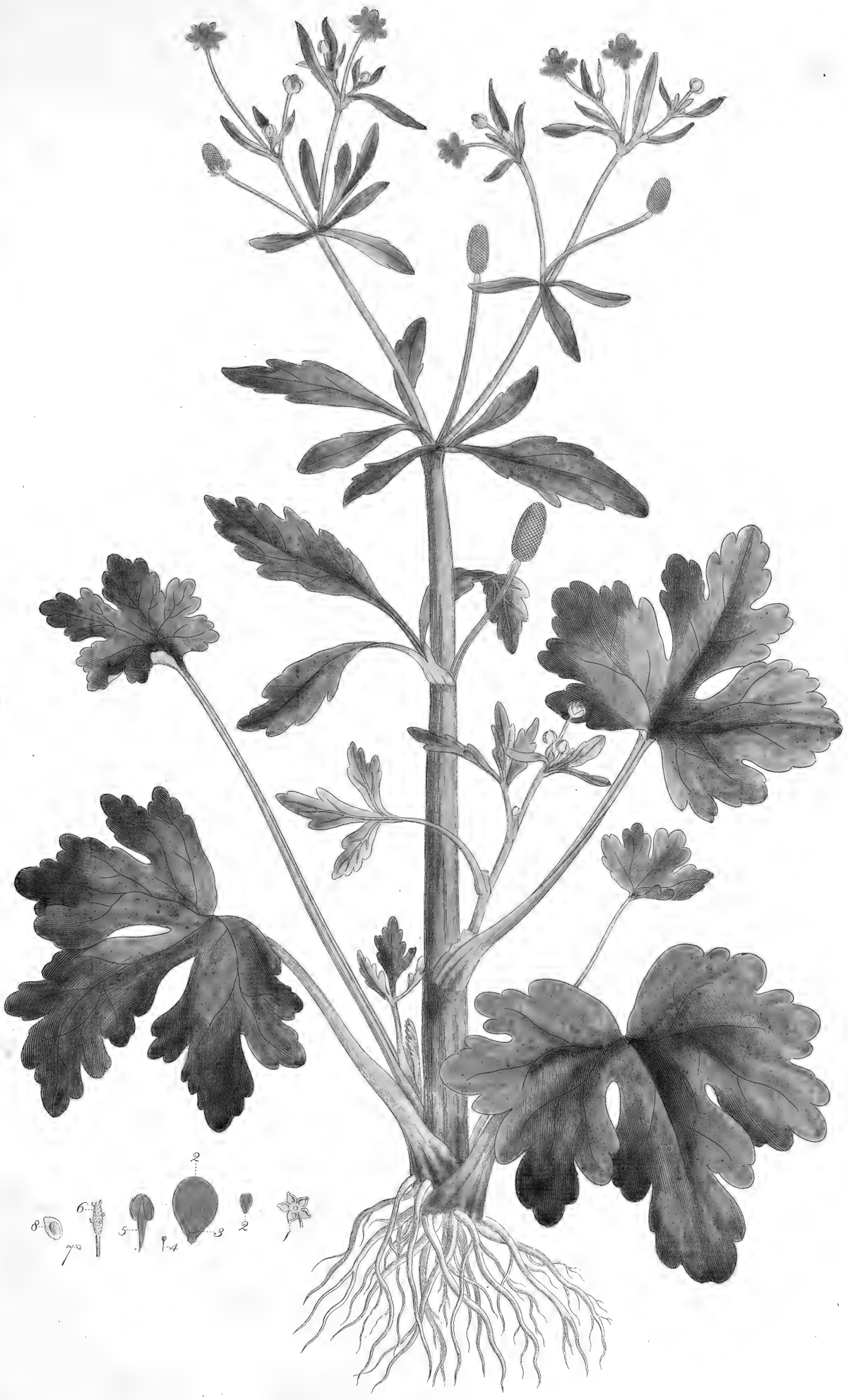
SEEDS numerous, flat, oval and pointed, ſmall, affixed to an oblong receptacle, *fig.* 6.

THIS ſpecies is diſtinguiſhed from the other *Crowfoots*, by its growing in or near the water, by its broad ſhining bottom leaves, thick ſtalk, ſmall yellow flowers, and ſmooth oblong ſeed-heads.

The leaves and flowers poſſeſs a conſiderable degree of acrimony, ſo as even to bliſter the ſkin, if applied to it: chewed in the mouth, they inflame and chop the tongue: nor have their effects been leſs violent when taken into the ſtomach. It is ſuſpected to have proved poiſonous to ſheep. *Haller hiſt. helv. p.* 75.

It begins to flower in May and June, and continues in bloſſom all the Summer, by the ſides of ponds and ditches.

It is eaten by goats, but refuſed by kine, ſheep, and horſes, *Linn. Amæn. Acad.*



Ranunculus sceleratus

AJUGA REPTANS. COMMON BUGLE.

AJUGA *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ labium ſuperius minimum. *Stamina* labio ſuperiore longiora.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

AJUGA ſtolonibus reptantibus. *Linnæi Sp. Pl. p.* 705.

BUGULA foliis ovato dentatis, flagellis reptans. *Haller hiſt. n.* 282.

BUGULA reptans. *Scopoli Fl. Carniol. n.* 716.

CONSOLIDA media pratenſis cœrulea. *Bauhin. pin.* 260.

BUGULA vulgaris. *Parkinſon* 525.

BUGULA *Gerard emac.* 631. *Raii Syn. p.* 245, Bugle. *Hudſon Fl. Angl. p.* 219.

RADIX perennis, fibroſa.

ROOT perennial and fibrous.

STOLONES plurimæ, repentes, ex ſuperiore parte radicis naſcuntur.

CREEPERS or ſhoots, in great numbers ſpring from the upper part of the root, and creep on the ground.

CAULIS erectus, ſemipedalis, quadratus, hirſutus, preſertim inter flores, purpureus.

STALK upright, about ſix inches high, ſquare, hairy, particularly among the flowers, of a purple colour.

FOLIA oppoſita, ovata, baſi anguſtiora, connata, dentata, venoſa, ſæpe purpurea et nitida; Bracteæ purpureæ, foliis ſimiles at minores et breviores.

LEAVES oppoſite, oval, narroweſt at bottom and joining together, indented at the edges, veiny, often purple and ſhining; Floral-leaves like the others, but ſmaller and ſhorter.

FLORES cœrulei, ſpicati, verticillati.

FLOWERS blue, growing in whirled ſpikes.

CALYX: PERIANTHIUM monophyllum, ſemiquinquefidum, piloſum, nervoſum, cœruleſcens, laciniis ſubæqualibus, acutis, duobus inferioribus magis approximatis, *fig.* 1.

CALYX a PERIANTHIUM of one leaf, half divided into five ſegments, hairy, nervous, blueiſh; the ſegments nearly equal, ſharp; the two lowermoſt approaching neareſt together, *fig.* 1.

COROLLA monopetala, ringens, tubus cylindraceus, incurvus, labium ſuperius breviſſimum, bidentatum, inferius trifidum, ſubtus hirſutulum, cœruleum, venis albis pictum, *fig.* 2, 3.

COROLLA of one PETAL, gaping, the tube cylindrical, bent downward; the upper lip very ſhort, with two teeth; the lower lip trifid, a little hairy underneath, of a blue colour, painted with white veins, *fig.* 2, 3.

STAMINA: FILAMENTA quatuor alba, recta, labio ſuperiore longiora: ANTHERÆ flavæ, *fig.* 3.

STAMINA: four white FILAMENTS, ſtrait, longer than the upper lip of the Corolla: ANTHERÆ yellow, *fig.* 3.

PISTILLUM: GERMEN quadripartitum: STYLUS filiformis, ſitu et longitudine Staminum: STIGMA bifidum, minimum, *fig.* 4, 5, 6.

PISTILLUM: GERMEN divided into four parts: STYLE thread-ſhaped, the length of and in the direction of the Stamina: STIGMA bifid and very ſmall, *fig.* 4, 5, 6.

NECTARIUM Glandula flava ad baſin Germinis unde Calyx ſubventricoſus fit, *fig.* 7.

NECTARY a yellow gland at the baſe of the Germen which makes the Calyx protuberate, *fig.* 7.

SEMINA quatuor, ovata in fundo Calycis, *fig.* 8.

SEEDS four, of an oval ſhape in the bottom of the Calyx, *fig.* 8.

THE *Bugle* is another of our Engliſh plants which may be recommended as an addition to our gardens. It is fond of a ſhady and moiſt ſituation, and readily propagates itſelf by means of its creeping ſhoots.

According to RAY, a variety with red flowers grows plentifully in the ſecond field on the left hand going from *Weſton Green* to *Eltham*; and with white flowers it has been found in *Charlton Wood*. The leaves in the Winter are often of a beautiful purple colour. It flowers in all our woods about town from May to July.

The character of this genus is taken from the ſhortneſs or rather want of the upper lip of the flower: excluſive of this mark, it is very nearly related to the genus *Glechoma* or *Ground Ivy*. It has a conſiderable large gland at the baſe of the germen in the bottom of the calyx, which occaſions the latter to protuberate. This gland, however, is not peculiar to this genus, but occurs in moſt of the plants of the ſame claſs, from whence the bees collect a great part of their honey.

It has been conſidered by the old writers as an excellent vulnerary, applied both inwardly and outwardly, particularly ſo in *France*, where, according to RAY, it is common for them to ſay that *thoſe who have Bugle and Sanicle need no Surgeon.*

Ajuga reptans

GLECHOMA HEDERACEA. GROUND-IVY.

GLECHOMA *Linnæi. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Antherarum ſingulum par in formam crucis connivens. *Calyx* 5-fidus.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

GLECHOMA *hederacea. Lin. Syſt. Vegetab. p.* 445. foliis reniformibus crenatis. *Spec. Pl. p.* 807. *Fl. Suecic. p.* 202.

CHAMÆCLEMA caule procumbente radicato, foliis reniformibus rotunde crenatis. *Haller hiſt. n.* 245.

CALAMINTHA *hederacea. Scopoli. Fl. Carniol. p.* 423.

CALAMINTHA humilior, folio rotundiore. *Tourn. Inſt. R. H.* 194.

HEDERA terreſtris. *Bauhin. Pin.* 306.

HEDERA terreſtris. *Gerard. emac.* 856.

HEDERA terreſtris vulgaris. *Parkinſon.* 676. *Raii Syn. p.* 296, Ground-ivy, Gill-go-by-ground, Alehoof, or Tunhoof. *Hudſon. Fl. Angl. p.* 224.

RADIX perennis, fibroſa.

CAULES ſeu potius Flagellæ plures, tetragoni, humi repentes et late ſe diffundentes, unde exſurgunt caules floriferi palmares aut ſemipedales, quadrati, hirſuti, (pilis deorſum verſis,) erecti, infirmi, geniculati, geniculis piloſis.

FOLIA oppoſita, longe petiolata, ſubreniformia, crenata, venoſa, petiolis ſuperne ſulcatis.

FLORES purpurei, verticillatim circa caulem diſpoſiti.

PEDUNCULI triflori.

INVOLUCRUM univerſale et partiale, *fig.* 2, 3, diphyllum, ſetaceum, ſed in floſculo intermedio, *fig.* 4, partiale deſideratur.

CALYX: PERIANTHIUM monophyllum, tubuloſum, quinquedentatum, dentibus ſubæqualibus, acuminatis, hirſutum, ſtriatum, *fig.* 5.

COROLLA monopetala, tubuloſa, ringens, tubus tenuis, ſuperne compreſſus, labium ſuperius erectum obtuſum, ſemibifidum, inferius patens, majus, trifidum, laciniâ intermediâ majori, emarginatâ, ad baſin hirſutâ et maculis ſaturatius purpureis notata, *fig.* 7, 8.

STAMINA: FILAMENTA quatuor ſub labio ſuperiore, quorum duo breviora: ANTHERÆ conniventes in formam crucis, albæ, *fig.* 9.

PISTILLUM: GERMEN quadrifidum, *fig.* 11, glandulâ cinctum, *fig.* 10. STYLUS filiformis, corollâ longior: STIGMA bifidum, acutum.

PERICARPIUM nullum, calyx in ſinu fovens

SEMINA quatuor, ovata.

ROOT perennial and fibrous.

STALKS, or rather Shoots, numerous, ſquare, creeping on the ground, and ſpreading wide, from whence ariſe the flowering ſtalks, which are from four to ſix inches high, ſquare, hirſute, (the hairs turning downward,) upright, weak, jointed, the joints hairy.

LEAVES oppoſite, ſtanding on long foot-ſtalks, ſomewhat kidney-ſhaped, notched, veiny, the leaf-ſtalks grooved on the upper ſide.

FLOWERS of a purple colour, diſpoſed in whirls around the ſtalk.

FLOWER-STALKS ſupporting three flowers.

INVOLUCRUM both univerſal and partial, *fig.* 2, 3, each compoſed of two fine pointed leaves, which however are wanting in the middle flower, *fig.* 4.

CALYX: a PERIANTHIUM of one leaf, tubular, with five teeth, (which are nearly equal, and long pointed,) hairy, and finely grooved, *fig.* 5.

COROLLA monopetalous, tubular, ringent, the tube ſlender, and compreſſed above; the upper lip upright, obtuſe, divided half way through; the lower lip larger, ſpreading, divided into three ſegments, of which the middle one is largeſt, with a ſlight notch, hairy at its baſe, and marked with purple ſpots of a deeper colour, *fig.* 7, 8.

STAMINA: four FILAMENTS placed under the upper lip, two ſhort and two long: ANTHERÆ white, forming a croſs, *fig.* 9.

PITSILLUM: GERMEN divided into four, *fig.* 11, ſurrounded by a gland, *fig.* 80: STYLE thread-ſhaped, larger than the corolla: STIGMA bifid, and pointed.

SEED-VESSEL none, the calyx in its cavity containing four

SEEDS of an oval ſhape.

GROUND-IVY has an aromatic, though not very agreeable ſmell; and a quick, bitteriſh, warm taſte. This herb is an uſeful corroborant, aperient, and detergent; and hence ſtands recommended againſt laxity, debility, and obſtructions of the viſcera. Some have had a great opinion of it for cleanſing and healing ulcers of the internal parts, even of the lungs; and for purifying of the blood. It is cuſtomary to infuſe the dried leaves in malt liquors; a practice not to be commended, though it readily communicates its virtue, and likewiſe helps to fine them down: ſcarce any other herb has this effect more remarkably than *Ground-ivy*. *Lewis's Diſp. p.* 150.

From the latter uſe, the plant has obtained the names of *Alehoof* and *Tunhoof*. *Raii hiſt. p.* 567.

The juice of the plant drawn up the noſtrils, not only mitigates, but totally removes violent and inveterate headachs. *Ibid.*

Notwithſtanding the credit which this plant has obtained with former writers on the Materia Medica, the modern practice holds it in little eſtimation.

Red hairy tumours are frequently found on it, which are occaſioned by the *Cynips Glechomæ*, *Linnæi Faun. Suecic. n.* 1520.

It ſlowly expels thoſe plants which grow next it, and hence impoveriſhes paſtures. *Lin. Fl. Suecic. p.* 202.

Cattle are not fond of it, and horſes are ſaid to be hurt by feeding on it: to make amends for this however, the juice of the herb, mixed with a little wine, and applied morning and evening, is ſaid to take away the film on horſes eyes. *Linn. Fl. Suecic. ex Loes.* 123.

The plant is well known to grow under hedges, in woods, on banks, and ſometimes in dry paſtures. It varies in ſize according to its ſituation; the flowers alſo vary in the degrees of purple; and make their appearance in April, May, and June.

Plectranthus hederaceus

LAMIUM ALBUM. WHITE DEAD-NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſup. integrum, fornicatum; lab. inf. 2-lobum, faux utrinque margine dentata.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

LAMIUM *album* foliis cordatis, acuminatis, ſerratis, petiolatis, verticillis vigintifloris. *Lin. Syſt. Vegetab. p.* 446. *Sp. pl. p.* 446. *Flor. Suecic. p.* 203.

LAMIUM foliis cordatis, acutis, ſerratis, verticillis multifloris. *Haller. hiſt. helv. n.* 271.

LAMIUM *album. Scopoli Fl. Carniol. n.* 700.

LAMIUM *album* non foetens folio oblongo. *Bauhin. Pin.* 231.

LAMIUM *album. Gerard emac.* 782.

LAMIUM vulgare album ſive Archangelicum flore albo. *Parkinſon.* 604.

Raii Syn. 240. White Archangel or Dead-Nettle.

Hudſon. Fl. Angl. ed. 1. *p.* 225. *ed.* 2. 255.

Lightfoot Fl. Scot. p. 308.

RADIX perennis, alba, geniculata, repens.

CAULES plurimi, pedales, ſuberecti, ſimplices, baſi tenuiores, quadrati, fiſtuloſi, hirſututi, in apricis ex ruſo-purpuraſcentes, ſurculi debiles, adſcendentes.

FOLIA petiolata, cordata, acuta, deflexa, inæqualiter ſerrata, apicibus denticulorum rufis introrſum verſis, venoſa, ſuperne et inferne hirſutula, ſummis ut caules ſæpe coloratis, circa radicem folioli etiam occurrunt ſubrotunda, crenulata.

FLORES verticillati, majuſculi, albi; haud infrequenter etiam rubore quodam tincti; verticilli decem quindecem aut vigintiflori.

CALYX: PERIANTHIUM monophyllum, tubuloſum, ſeſſile, nervoſum, quinquedentatum, dentibus ſetaceis, hirſutum, perſiſtens, inferne ad baſin maculis purpureis notatum et bractæâ brevi lineari ſuffultum, *fig.* 1, 2.

COROLLA monopetala, ringens; TUBUS longitudine fere labii ſuperioris, curvatus, antice inferne prominulus, ſuperne intropreſſus, faux inflata, margine utraque denticulis duobus plerumque notata, labium ſuperius fornicatum, piloſum, emarginatum, aliquando etiam dentatum, lineis duabus elevatis ad verticem coadunatis notatum, labium inferius bifidum, reflexum, crenulatum, ad baſin maculatum, *fig.* 3, 4.

STAMINA: FILAMENTA quatuor, filiformia, alba, apicibus villoſis, paululum incraſſatis et incurvatis: ANTHERÆ purpureæ, hirſutæ; POLLEN flavum, *fig.* 5.

PISTILLUM: GERMEN quadrifidum, *fig.* 6, glandulâ cinctum, *fig.* 7: STYLUS filiformis longitudine et ſitu Staminum: STIGMA bifidum acutum, *fig.* 8, 9.

SEMINA quatuor, in fundo calycis, trigona, appendiculata, *fig.* 10,

ROOT perennial, white, jointed, and creeping.

STALKS numerous, a foot high, nearly upright, unbranched, ſlender at bottom, ſquare, hollow, and ſlightly hairy; in expoſed ſituations, of a reddiſh purple colour: the young ſhoots weak and riſing upward.

LEAVES ſtanding on foot-ſtalks, heart-ſhaped, pointed, hanging down, unequally ſerrated; the tips of the little teeth red and turned inward, veiny, above and beneath ſomewhat hirſute; the uppermoſt leaves, as well as the ſtalks, frequently coloured; the leaves about the root are often ſmall, round, and crenated.

FLOWERS growing in whirls, largiſh, of a yellowiſh white colour, not uncommonly tinged with red; the whirls having ten, fifteen, or twenty flowers in them.

CALYX: a PERIANTHIUM of one leaf, tubular, ſeſſile, rib'd, hirſute and continuing, having five teeth, which are ſetaceous; on its lower ſide, at bottom, marked with purple ſpots, and ſupported by a ſhort linear bracteal leaf, *fig.* 1, 2.

COROLLA monopetalous and ringent; the TUBE nearly the length of the upper lip, and crooked, anteriorly prominent below, and preſſed in above; the mouth inflated, and marked generally on each ſide with two little teeth; the upper lip arched, hairy, with a ſlight notch, and ſometimes indented, diſtinguiſhed by two elevated lines, which unite at the crown; the inferior lip bifid, turned back, ſlightly notched, and ſpotted at bottom, *fig.* 3, 4.

STAMINA: four FILAMENTS, filiform, white, the tips villous, a little thickned, and bent inward: ANTHERÆ purple and hairy; POLLEN yellow, *fig.* 5.

PISTILLUM: GERMEN divided into four, *fig.* 6, ſurrounded by a gland, *fig.* 7. STYLE filiform, of the ſame length and ſituation as the Stamina: STIGMA bifid and acute, *fig.* 8, 9.

SEEDS four, in the bottom of the Calyx, three cornered, with a little appendage at bottom, *fig.* 10.

THE *White Dead-Nettle* or *Archangel*, is one of our earlieſt ſpring plants, ornamenting our banks in April and May; and is much reſorted to by Bees for the ſake of its honey, which is ſecreted into the bottom of the tube in conſiderable plenty, by a little gland ſurrounding the baſe of the germen.

The flowers have been particularly celebrated in uterine fluors, and other female weakneſſes; as alſo in diſorders of the lungs; but they appear to be of very weak virtue: *Lewis's Diſp. part.* 2. *p.* 163.

The bruiſed leaves are recommended to diſcuſs tumours, even of the ſcrophulous kind; *Rutty's Mat. Med. p.* 271; but very little dependance is to be placed on ſuch recommendations. There is ſcarce a plant but what (if we may believe the antients) poſſeſſes ſome wonderfully healing power of this kind.

Like the other *Lamiums*, it has a diſagreeable ſmell when bruiſed.

Boys make whiſtles of the ſtalks.

In the ſouth of France, it is ſaid to occur with a purple flower. I have frequently found it ſlightly tinged with red.

The *Phalæna Chryſitis, Burniſhed Braſs Moth, Lin. Faun. Suecic. p.* 311. *Albin. Inſect. tab.* 71, feeds on it: and in Sweden the leaves are eaten in the ſpring as a pot-herb; *Lin. Flor. Suecica.*

Having a ſtrong creeping perennial root, and being a plant which cattle diſlike, it ſhould be extirpated by the Farmer

N.° 115

Lamium amplexicaule

Sansom Sculp.

LAMIUM AMPLEXICAULE. HENBIT DEAD-NETTLE.

LAMIUM *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Corollæ lab. ſuper. integrum, fornicatum; lab. inf. 2-lobum; faux utrinque margine dentata.

Raii Syn. Gen. 14. Suffrutices et Herbæ verticillatæ.

LAMIUM *amplexicaule* foliis floralibus ſeſſilibus amplexicaulibus obtuſis. *Linnæi Syſt. Vegetab. p.* 446. *Spec. Plant. p.* 203. *Flor. Suecic. p.* 809.

LAMIUM foliis radicalibus petiolatis, lobatis, ſuperioribus caulem ambientibus, rotunde inciſis. *Haller hiſt. n.* 273.

LAMIUM *amplexicaule. Scopoli Fl. Carniol. n.* 702.

LAMIUM folio caulem ambiente majus et minus. *Bauhin pin.* 231.

ALSINE hederula altera. *Gerard. emac.* 616.
ALSINE hederula folio major. *Parkinſon* 762.

Raii Syn. p. 240. Great Henbit.

Hudſon. Fl. Angl. p. 225.

Lightfoot Fl. Scot. p. 309.

RADIX annua, fibroſa, albida.

CAULES ex una radice plures, dodrantales, aut pedales, ſuberecti, quadrati, læves, ramis paucis oppoſitis.

FOLIA oppoſita, inferiora petiolata, ſubrotundo cordata, inciſo-crenata, venoſa, hirſutula, petiolis ſuperne concavis foliis longioribus, ſuperiora ſeſſilia, ſemiorbiculata, inciſa, laciniis obtuſiuſculis.

FLORES verticillati ad 15, duorum generum, manci ſcilicet et perfecti, manci breves, calycibus paulo longiores, apicibus ruberrimis hirſutis clauſis, *fig.* 1, 2; perfecti calyce quadruplo longiores, purpurei, e ſummitatibus caulium utplurimum erumpentes, *fig.* 3.

CALYX *in perfectis*, PERIANTHIUM quinquedentatum, tubuloſum, vix manifeſte ſtriatum, dentibus æqualibus, acuminatis, hirſutis, *fig.* 4.

COROLLA: TUBUS prælongus, cylindraceus, ſuberectus, faux inflata, margine reflexâ maculatâ, denticulis duobus notata, collum prominulum, labium ſuperius fornicatum, hirſutum, ſubintegrum; labium inferius deflexum, bilobum, maculis purpureis notatum, *fig.* 5, 6, 7, 8.

STAMINA: FILAMENTA quatuor, quorum duo longiora, alba, ſub labio ſuperiore: ANTHERÆ piloſæ, polline croceo refertæ, *fig.* 9.

PISTILLUM: GERMEN quadrifidum: STYLUS filiformis, longitudine et ſitu ſtaminum: STIGMA bifidum, acutum, *fig.* 10.

SEMINA quatuor in fundo calycis, appendiculata, punctis albis notata, *fig.* 11, 12.

ROOT annual, fibrous, and of a whitiſh colour.

STALKS, ſeveral from one root, nine inches or a foot high, nearly upright, ſquare, ſmooth, with a few oppoſite branches.

LEAVES oppoſite, the lower ones ſtanding on foot-ſtalks, of a roundiſh heart-ſhaped figure, deeply crenated, veiny, ſlightly hairy; the foot-ſtalks grooved on the upper part, and longer than the leaves; the upper ones ſemiorbicular, cut in at the edges, the ſegments ſomewhat blunt.

FLOWERS growing in whirls to 15, of two kinds, perfect and imperfect; the imperfect ones ſhort, a little longer than the Calyx, the tips very red, hairy, and cloſed, *fig.* 1, 2; the perfect ones four times the length of the Calyx, of a bright purple colour, and generally breaking out from the tops of the ſtalks, *fig.* 3.

CALYX *in the perfect ones*, a PERIANTHIUM with five teeth, tubular, ſcarce manifeſtly ſtriated; the teeth equal, acuminated, and hirſute, *fig.* 4.

COROLLA: the TUBE very long, cylindrical, nearly upright, the mouth inflated, the edge turned back, ſpotted, and marked with two little teeth; the neck a little prominent; the upper lip arched, hirſute, and nearly entire; the lower lip turning down, having two lobes, which are ſpotted with purple, *fig.* 5, 6, 7, 8.

STAMINA: four FILAMENTS, two long and two ſhort, of a white colour, placed under the upper lip: ANTHERÆ hairy, filled with a ſaffron-coloured pollen, *fig.* 9.

PISTILLUM: GERMEN divided into four parts: STYLE filiform, of the ſame length and ſituation with the Stamina: STIGMA bifid and acute, *fig.* 10.

SEEDS four, in the bottom of the Calyx, with a little appendadge to each, ſurface covered with white ſpots, *fig.* 11, 12.

IN the flowering of this plant, there are ſome circumſtances well deſerving of attention.

Two kinds of bloſſoms are obſervable on it; the one a very ſmall ſhort one, like the rudiments of a flower, a little longer than the Calyx, with the mouth cloſed, very hairy, and of a bright red colour; the other a flower like that of the *Lamium purpureum*, but much longer.

The firſt of theſe bloſſoms, which ſo far as reſpects the Corolla, are evidently imperfect, appear very early in the Spring, in February and March: the long and perfect bloſſoms do not make their appearance till May or June, when they are obſervable on the tops of the ſtalks: and if the progreſs of the flowers be watched, the Corolla will be found to be gradually enlarged in different bloſſoms, till the weather being ſufficiently warm, they come forth fully formed.

Thoſe who have attended to the changes of Inſects, muſt have obſerved, that if a Caterpillar has, previous to its changing into the chryſalis or pupa ſtate, been deprived of its proper quantity of food, the Fly has come forth perfect in all its parts except the wings, which are crumpled up, and never expand; ſo this plant, for want of a ſufficient degree of warmth, is not able to puſh forth an expanded Corolla; yet being perfect in every other part, the ſpecies ſuffers no diminution.

I had for ſeveral years imagined, that the imperfect flowers were the rudiments of the long bloſſoms; but on a more minute enquiry, I found that they never grew any longer, but decayed. I was then ready to ſuppoſe that they were barren flowers; but on diſſecting them, I found that each had both Stamina and a Piſtillum.

Since the above obſervations were made, I find, on looking into the *Flora Suecica*, that LINNÆUS takes notice of its ſcarce ever producing perfect bloſſoms in *Sweden*.

Here then is a proceſs ſomewhat ſimilar to what we obſerve in the Violet and ſome other plants, where perfect ſeed is produced, although the Corolla be not perfectly formed.

It grows with us frequently on walls; and in the greateſt abundance in the fields and gardens about *Batterſea* and *Lambeth*, where the ſoil is light.

Thymus Serpyllum.

THYMUS SERPYLLUM. COMMON WILD THYME.

THYMUS *Linnæi Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.
Calycis bilabiati faux villis clauſa.

Raii Syn. Gen. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

THYMUS *Serpyllum* floribus capitatis, caulibus repentibus, foliis planis obtuſis, baſi ciliatis. *Linnæi Syſt Vegetab. p.* 452.

THYMUS foliis ovatis ad baſin ciliatis. *Haller hiſt. n.* 235.

THYMUS *Serpyllum Scopoli Fl. Carniol. n.* 736.

SERPYLLUM vulgare minus. *Bauhin Pin.* 220.

SERPYLLUM vulgare. *Gerard emac.* 570.

SERPYLLUM vulgare minus. *Parkinſon* 8. *Raii Syn. p.* 230, Common Mother of Thyme. *Hudſon Fl. Angl. p.* 229.

RADIX lignoſa, fibroſa, fuſca, perennis.
CAULES numeroſi, quadrangulares, duriuſculi, procumbentes, ramoſi, ramis alternis.
FOLIA ovata, petiolata, integerrima, plerumque lævia, glandulis punctata, petiolis ciliatis, *fig.* 1, 2.

FLORES in ſummitatibus caulium verticillatim diſpoſiti, et in capitulis ſubrotundis congeſti.
CALYX: PERIANTHIUM monophyllum, tubulatum, ſtriatum, fauce villis clauſo, *fig.* 9, ſemibifidum in duo labia, labium ſuperius latius, tridentatum, dentibus reflexis; inferius biſetum dentibus ciliatis, *fig.* 3, 4, 5.

COROLLA monopetala; TUBUS longitudine ſetarum calycis, labium ſuperius reflexum, emarginatum, obtuſum, inferius trifidum, longius, laciniis obtuſis medio longiore, *fig.* 6.

STAMINA: FILAMENTA quatuor inæqualia; ANTHERÆ minimæ, *fig.* 7.
PISTILLUM: GERMEN quadripartitum; STYLUS Corolla longior, recurvatus; STIGMA bifidum, acutum, *fig.* 8.
SEMINA quatuor, parva, ſubrotunda, fuſca, *fig.* 10, 11.

ROOT woody, fibrous, of a brown colour, and perennial.
STALKS numerous, ſquare, hard, procumbent, and branched; the branches alternate.
LEAVES oval, ſtanding on foot-ſtalks, entire at the edges, generally ſmooth, dotted with little glands; the foot-ſtalks furniſhed with long hairs, *fig.* 1, 2.
FLOWERS placed in whirls on the tops of the ſtalks, and forming ſmall roundiſh heads.
CALYX: a PERIANTHIUM of one leaf, tubular, ſtriated, the mouth cloſed up with hairs, *fig.* 9, divided into two lips; the uppermoſt having three teeth which bend back; the lowermoſt two, much longer, narrower, and edged with hairs, *fig.* 3, 4, 5.
COROLLA monopetalous: the TUBE the length of the Calyx; the upper lip turning back, notched in and blunt; the lowermoſt longer, divided into three ſegments, the ſegments obtuſe, the middle one longeſt, *fig.* 6.
STAMINA: four FILAMENTS of unequal lengths: ANTHERÆ very minute, *fig.* 7.
PISTILLUM: GERMEN dividing into four parts; STYLE longer than the Corolla, and turning upwards; STIGMA bifid and pointed, *fig.* 8.
SEEDS four, ſmall, roundiſh, of a brown colour, *fig.* 10, 11.

FEW Plants are ſubject to ſo many varieties as the *Wild Thyme*. In its moſt natural ſtate, when found on dry expoſed Downs, it is ſmall and procumbent: when growing among Furze or other plants, which afford it ſhelter, it runs up with a ſlender ſtalk to a foot or more in height, and aſſumes an appearance which might puzzle the young Botaniſt. It differs alſo very much in the ſmoothneſs and hairineſs of its leaves: and there is a ſingular variety of it, remarked by LINNÆUS, with woolly heads, *(Capitulis tomentoſis)* which are the nidus of ſome Inſect. We have ſeen whole banks covered with this turgid variety. The *Veronica Chamædrys*, *Glechoma hederacea*, *Valeriana Locuſta*, and other plants, are frequently diſtorted, and appear under the ſame diſguiſe from a ſimilar cauſe.

On dry chalky Downs the *Wild Thyme* abounds all over England; flowering in July and Auguſt.

It has been a received opinion, that Thyme and other aromatic herbs, give a flavour to the fleſh of Sheep that feed where theſe plants are found: but curious obſervers have remarked, that Sheep neither eat Thyme nor any other aromatic herb when they have a free choice of paſturage.*

The Antients planted Thyme for the ſake of their Bees, who collect Honey very largely from it; which at that period was of more value than at preſent: the cultivation of Sugar in the Weſt India Iſlands, has contributed much to reduce its conſequence in domeſtic œconomy.

THEOPHRASTUS relates, that *Thyme* produced no ſeed that could be diſcovered; but that the plant might be encreaſed by ſowing its flowers. PLINY copies this paſſage from THEOPHRASTUS; and inſtead of doubting the fact, remarks "*quid non tentavere homines?*" What experiments have not mankind tried? The credulity of the Antients is very wonderful! Whatever one Author advanced, the next took for granted, to the great detriment of natural hiſtory.—Inveſtigation was never thought of!

Dr. ARMSTRONG, in his elegant and claſſical poem on health, recommends the ſoil where this plant *(Thyme or Marjoram)* abounds, as particularly healthful and proper for habitations.

——— "*Mark where the dry Champaign*
"*Swells into chearful hills; where Marjoram*
"*And Thyme, the love of Bees, perfume the Air.*
"*There bid thy roofs, high on the baſking ſteep*
"*Aſcend: there light thy hoſpitable fires*".

* See account of Sheep-walks in Spain, Gent. Mag. 1764.

Erysimum alliaria

Sansom Sculp

ERYSIMUM ALLIARIA. SAUCE-ALONE.

ERYSIMUM *Linnæi Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua columnaris, exacte tetraëdra. *Cal.* clauſus.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

ERYSIMUM *Alliaria* foliis cordatis. *Linnæi Syſt. Vegetab. p.* 499. *Sp. Pl. p.* 923. *Fl. Suecic. n.* 600.

ERYSIMUM *Haller Hiſt. p.* 208. *n.* 480.

SISYMBRIUM *Alliaria. Scopoli Fl. Carn. n.* 825.

ALLIARIA *Bauhin Pin.* 110. *Gerard emac.* 796. *Parkinſon* 112.

HESPERIS allium redolens. *Raii Syn.* 293. Jack by the Hedge, or Sauce-alone.

Hudſon. Fl. Angl. ed. 2. *p.* 286.

Lightfoot Fl. Scot. 186.

RADIX biennis, albida, fuſiformis, plurimis fibrillis inſtructa.

CAULIS erectus, bi aut tripedalis, teres, lævis, ſubſtriatus, inferne purpureus, villoſus, ſuperne ramoſus.

RAMI pauci, alterni, erecti.

FOLIA alterna, petiolata, cordata, venoſa, ſubrugoſa, inferiora longius petiolata, rotundata, ſuperiora acuta, inæqualiter dentato-ſerrata.

FLORES nivei, terminales, erecti, pedunculis longitudine florum inſidentes.

CALYX: PERIANTHIUM tetraphyllum, foliolis oblongis, pallide vireſcentibus, obtuſis, deciduis, apice interne concavis, externe gibbis, *fig.* 1.

COROLLA: PETALA quatuor, obovata, unguiculata, unguis erectus, linearis, limbus patens, venis paucis exaratus, *fig.* 2.

STAMINA: FILAMENTA ſex, ſubulata, alba, duo breviora incurvata, quatuor longiora erecta, longitudine Styli, *fig.* 3, 6: ANTHERÆ oblongæ, cordatæ, flavæ, incumbentes, erectæ, *fig.* 4, 5.

NECTARIUM: glandula rotunda ſolitaria utrinque ad baſin Staminum longiorum, baſis vero Staminum breviorum glandulâ cingitur.

PISTILLUM: GERMEN obſcure tetragonum, oblongum, *fig.* 7: STYLUS breviſſimus, *fig.* 8: STIGMA capitato-truncatum.

PERICARPIUM: SILIQUA biuncialis, teres, ſubtetragona, lineata, bilocularis, bivalvis, *fig.* 9.

SEMINA plurima, oblonga, fuſca, nitida, ſtriata, utrâque extremitate oblique truncatâ, diſſepimento utrinque nidulantia, *fig.* 10.

ROOT biennial, of a whitiſh colour, tapering, and furniſhed with numerous fibres.

STALK upright, from two to three feet high, round, ſmooth, ſomewhat ſtriated, at bottom purple, and ſlightly hoary, at top branched.

BRANCHES few, alternate, and upright.

LEAVES alternate, ſtanding on foot-ſtalks, heart-ſhaped, veiny, and ſomewhat wrinkled; the lower ones ſtanding on long foot-ſtalks, and round at the tips; the upper ones pointed, and unequally toothed or ſawed.

FLOWERS white, terminal, upright, ſtanding on ſtalks the length of the flowers.

CALYX: a PERIANTHIUM of four leaves, which are oblong, of a pale green, obtuſe, the tips internally concave, externally gibbous, *fig.* 1.

COROLLA: four PETALS, inverſely oval, and clawed; the claw erect and linear; the limb ſpreading, and grooved with a few veins, *fig.* 2.

STAMINA: ſix FILAMENTS tapering, and white; the two ſhorter ones bending inwards; the four longer ones upright, the length of the Style, *fig.* 3, 6: ANTHERÆ of an oblong heart ſhape, yellow, incumbent, and upright, *fig.* 4, 5.

NECTARY, a ſmall round ſingle gland, placed on each ſide at the baſe of the longeſt Stamina; but the baſe of each of the ſhorteſt Stamina, is wholly ſurrounded by a glandular ſubſtance.

PISTILLUM: the GERMEN obſcurely four corner'd, and oblong, *fig.* 7: STYLE very ſhort, *fig.* 8: STIGMA, forming a little head, appearing as if cut off.

SEED-VESSEL: a POD about two inches long, round, obſcurely quadrangular, with a fine prominent line between each angle, of two cavities and two valves, *fig.* 9.

SEEDS numerous, oblong, brown, ſhining, finely grooved, obliquely cut off at each end, and partly buried in the diſſepimentum on each ſide, *fig.* 10.

THE whole of this plant, on being rubbed, diſcovers a ſtrong ſmell of Garlic, whence its name of *Alliaria.*

Medicinally, the leaves are recommended internally, as ſudorifics and deobſtruents, ſomewhat of the nature of Garlic, but much milder; and externally, as antiſeptics, in gangrenes and cancerous ulcers: *Lewis's Diſp. p.* 78.

Dietically it is uſed in ſauces; and by the country people eaten with bread and butter: *Raii Hiſt. Pl. et Syn.*

The ſeeds bruiſed, and put up the noſtrils, are ſaid to promote ſneezing: *Raii Hiſt. Pl. p.* 792.

The *Curculio Alliariæ, Linn. Faun. Suecic. n.* 580, perforates and dwells in the ſtalks of this plant: *Fl. Suecic.*

If eaten by Cows, which it appears to be from LINNÆUS's experiments, it will be liable to give a diſagreeable taſte to the milk; ſhould this happen, the Farmer will eaſily deſtroy it, as it is a biennial.

It grows very common by hedge ſides; flowers in April and May.

SCOPOLI obſerves that it does not retain the generic character of an *Eryſimum*, wherefore he arranges it as a *Siſymbrium.*

ARABIS THALIANA. PODDED MOUSE-EAR.

ARABIS *Linnæi Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Glandulæ nectariferæ-4, ſingulæ intra Calycis foliola, ſquamæ inſtar reflexæ.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

ARABIS *thaliana* foliis radicalibus ovato-lanceolatis, dentatis, punctato-ſcabris.

ARABIS *thaliana* foliis petiolatis lanceolatis integerrimis. *Linn. Syſt. Vegetab. p.* 501. *Fl. Suecic. n.* 605.

ARABIS foliis radicalibus petiolatis, ovatis, dentatis caule ſubnudo ramoſo. *Haller hiſt. n.* 452.

TURRITIS vulgaris ramoſa. *Raii Syn.* 294, Mouſe-ear.

BRASSICA ſpuria minima, foliis hirſutis et glabris. *Raii Syn. ed.* 2. 166.

BURSÆ paſtoriæ ſimilis ſiliquoſa major et minor. *Bauhin Pin.* 108.

PILOSELLA ſiliquoſa. *Thal. tab.* 7

PARONYCHIA major et altera minor. *Parkinſon* 556. *Hudſon Fl. Angl. p.* 255.

RADIX annua, ſimplex, fibroſa, albida.

FOLIA radicalia oblongo-ovata, petiolata, dentata, preſertim prope baſin, hirſuta, utrinque ſcabra punctis prominulis, caulina ſeſſilia dentata, *fig.* 1, 2; hirſuties ad baſin foliorum ſimplex, ad marginem et ſuperficiem bi et trifurcata.

CAULIS ſemipedalis ad pedalem, erectus, ſubramoſus, teres, rore glauco tectus, hirſutus, ramuli alterni, nutantes.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovatis, concavis, hirſutulis, *fig.* 3. auct.

COROLLA: PETALA quatuor, calyce duplo longiora, apice dilata, integra, obtuſa, *fig.* 4. auct.

STAMINA: FILAMENTA quatuor ſubulata quorum duo breviora, *fig.* 5; ANTHERÆ flavæ, parvæ.

PISTILLUM: GERMEN oblongum, tenue; STYLUS breviſſimus longitudine Staminum; STIGMA obtuſum, *fig.* 6.

PERICARPIUM: ſiliqua tenuis, ſemuncialis, bivalvis, *fig.* 7, 8, continens

SEMINA plurima, flaveſcentia, *fig.* 9.

ROOT annual, ſimple, fibrous, whitiſh.

LEAVES of an oblong oval ſhape, ſtanding on foot-ſtalks, indented, eſpecially near the baſe of the leaf, hairy, rough on each ſide, with little prominent points; leaves on the ſtalk ſeſſile and indented, *fig.* 1 2; the hairs at the baſe of the leaf ſimple, thoſe at the edges and on the ſurface dividing into two or three forks.

STALK from ſix to twelve inches high, upright, ſomewhat branched, round, crooked, covered with a bloom, hairy, the little branches alternate and drooping.

CALYX: a PERIANTHIUM of four leaves, which are oval, concave, and ſlightly hairy, *fig.* 3, mag.

COROLLA of four PETALS, twice the length of the Calyx, dilated at top, entire and obtuſe, *fig.* 4.

STAMINA: four tapering FILAMENTS, two of which are ſhorter than the others, *fig.* 5; ANTHERÆ ſmall and yellow.

PISTILLUM: GERMEN oblong, ſlender, STYLE very ſhort, equal in height to the Stamina; STIGMA blunt, *fig.* 6.

SEED-VESSEL: a ſmall ſlender pod about half an inch long, of two valves, *fig.* 7, 8, containing

SEEDS. Several yellowiſh ſeeds, *fig.* 9.

AT firſt ſight this little plant, in its larger ſtate, forms ſome reſemblance to the *Shepherds Purſe*; and when ſmall, may be overlooked or miſtaken for the *Draba verna*, particularly as it grows in ſimilar ſituations; but by its ſlender pods it may readily be diſtinguiſhed.

We have it frequent enough on our walls, and ſometimes on dry ground, about town: and it may be found in great abundance on the ſouth ſide of *Greenwich Park Wall*, the top of which, facing the late SIR GREGORY PAGE's, is in particular parts almoſt covered with it; while the bottom of it, is at the ſame time, beautifully ornamented with the *Geranium Cicutarium*.

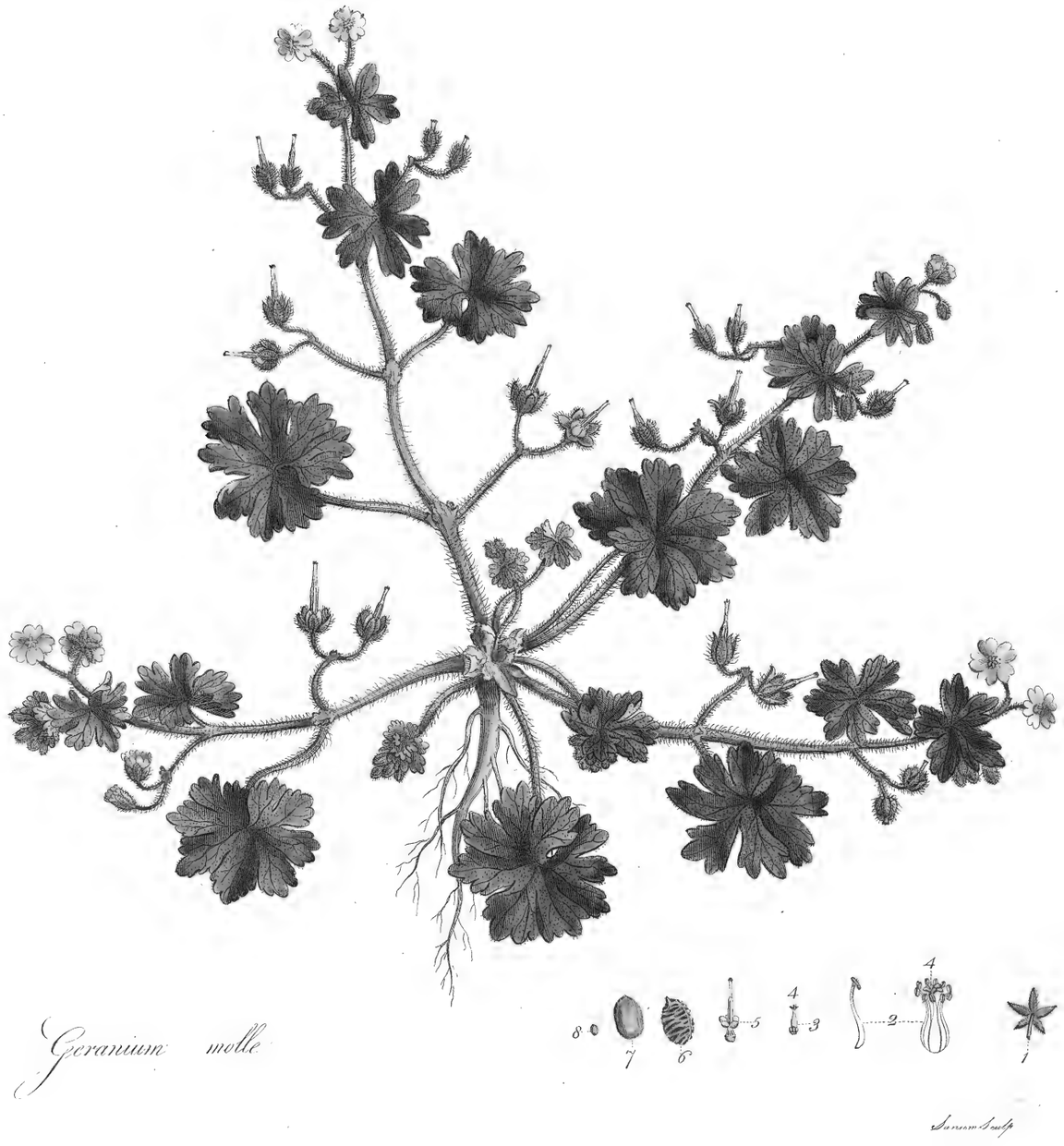
It flowers in March and April, and the ſeed is ripe in May.

No particular virtues or uſes are aſcribed to it.

Like all other plants (which is a circumſtance that cannot be too often inculcated into the mind of the young Botaniſt) it varies very much in ſize; ſometimes being not more than an inch or two in height, and at other times more than a foot.

The *Glandulæ Nectariferæ*, often found at the baſe of the Stamina, in the plants of the Claſs *Tetradynamia*, and which according to LINNÆUS form the character of the Genus *Arabis*, are in this ſpecies ſo very minute, as ſcarcely to be diſcerned with a magnifier

Arabis Thaliana.



Geranium molle

Sansom Sculp

GERANIUM MOLLE. COMMON DOVES-FOOT CRANES-BILL.

GERANIUM *Linnæi Gen. Pl.* MONADELPHIA DECANDRIA.

Monogyna. Stigmat. 5. *Fructus* roſtratus, 5-coccus.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *molle* pedunculis biflоris, foliiſque floralibus alternis, petalis bifidis, calycibus muticis, caule erectiuſculo. *Linnæi Syſt. Vegetab. p.* 515. *Sp. Pl. p.* 955. *Fl. Suecic. p.* 577.

GERANIUM foliis molliſſimis, hirſutis, reniformibus, ſemiquinquefidis, lobis ſemitripartitis, obtuſis. *Haller hiſt. n.* 939.

GERANIUM *molle. Scopoli Fl. Carniol.* an noſtra planta?

GERANIUM columbinum villoſum, petalis bifidis purpureis. *Vaill. Paris.* 79. *t.* 15. *fig.* 3.

GERANIUM columbinum. *Ger. emac.* 938.

GERANIUM columbinum vulgare. *Parkinſon* 706. *Raii Syn. p.* 359, Doves-foot, or Doves-foot-Cranes-bill.

GERANIUM folio malvæ rotundo. *Bauhin. Pin.* 318.

Hudſon Fl. Angl. p. 265.

Lightfoot Fl. Scot. p. 370.

RADIX annua, fuſiformis, ſimplex.

CAULES plures, utplurimum procumbentes, teretes, rubicundi, dodrantales aut pedales, villoſi, ramoſi.

FOLIA radicalia petiolis longis, teretibus, villoſis, inſidentia, ſubrotunda, villoſa, ſubtus venoſa, ſeptemfida, laciniis inciſis, caulina alterna in lacinias pauciores, anguſtiores et acutiores diviſa.

STIPULÆ ad ſingula genicula quaternæ, membranaceæ, mareſcentes.

PEDUNCULI longitudine et forma petiolorum üſque oppoſiti, bifidi, biflori: pedicelli pedunculo triplo fere breviores, ſtipulis minoribus ad baſin cinctis, ad lentem ſubviſcoſis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovato-acutis, trinervibus, piloſis, inæqualibus, brevi mucrone, rufo, non admodum acuto, terminatis, *fig.* 1.

COROLLA: PETALA quinque purpurea, obcordata, calyce paulo longiora, unguibus parvis, utrinque ciliatis.

STAMINA: FILAMENTA decem, alba, æqualia, baſi lata, vix coaleſcentia: ANTHERÆ cœruleæ, *fig.* 2.

PISTILLUM: GERMEN quinquangulare: STYLUS ſubulatus, viſcoſus: STIGMATA quinque, rubra, reflexa, *fig.* 3, 4.

SEMINA quinque, ovata, glabra, *fig.* 5, 7, 8. *Arillo rugoſo* tecta, *fig.* 6.

ROOT annual, tapering, and ſimple.

STALKS ſeveral, procumbent, round, of a reddiſh colour, from nine inches to a foot in length, villous, and branched.

LEAVES: thoſe next the root ſitting on long, round, villous foot-ſtalks, of a roundiſh form, hoary, and veiny underneath, deeply divided into ſeven ſegments, which are jagged: the leaves on the ſtalk alternate, divided into fewer ſegments, which are narrower and more pointed.

STIPULÆ four at each joint, membranous, and withering.

FLOWER-STALK: general flower-ſtalk the length and form of the leaf-ſtalks, and growing oppoſite to them, bifid, and ſupporting two flowers: partial flower-ſtalks nearly three times ſhorter than the general one, ſurrounded at their baſe by ſmaller ſtipulæ, ſome of the hairs on which appearing glandular if viewed with a glaſs.

CALYX: a PERIANTHIUM of five leaves, oval, pointed, having three ribs, hairy, unequal, and terminated by a reddiſh and ſomewhat blunt point, *fig.* 1.

COROLLA: five purple PETALS, inverſely heart-ſhaped, a little longer than the Calyx, the claws ſmall, and edged on each ſide with hairs.

STAMINA: ten white FILAMENTS, of an unequal length, broad at bottom, but not perceptibly united: ANTHERÆ blue, *fig.* 2.

PISTILLUM: GERMEN five-cornered: STYLE tapering, with glandular hairs: STIGMATA five, of a red colour, and turning back, *fig.* 3, 4.

SEEDS five, oval and ſmooth, *fig.* 5, 7, 8, covered with a *wrinkled Arillus*, *fig.* 6.

THE *Geranium molle* is the moſt common of all our *Geraniums*, and one of the earlieſt in bloſſom, beginning to blow in April, and continuing through the Summer. Its moſt natural ſituation is on a dry bank; yet it very often is found in paſtures, and under walls. If growing by itſelf, the ſtalks are uſually procumbent; among other plants it is often drawn upright.

It varies very much in ſize; the flowers alſo vary much both in ſize and colour. In the *Lawn* before *Chelſea Hoſpital*, I have noticed this plant almoſt as large as the *pyrenaicum* of LINNÆUS. Its flowers are ſometimes white, ſometimes pale red, with many gradations of purple.

It is moſt likely to be miſtaken for the *rotundifolium* and *pyrenaicum*, neither of which are common plants with us: in what reſpect it differs from theſe, we ſhall mention when they come to be deſcribed.

We may remark here, that the *Arilli*, or coverings of the ſeeds, *fig.* 6, are curiouſly wrinkled; but the ſeeds themſelves are perfectly ſmooth.

MALVA SYLVESTRIS. COMMON MALLOW.

MALVA *Linnæi Gen. Pl.* MONADELPHIA POLYANDRIA.

Cal. duplex: exterior triphyllus. *Arilli* plurimi monoſpermi.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

MALVA *ſylveſtris* caule erecto herbaceo, foliis ſeptemlobatis acutis, pedunculis petioliſque piloſis. *Linnæi Syſt. Vegetab. p.* 520.

MALVA caule erecto; foliis lobatis: lobis ſerratis, quinis et ſeptenis. *Haller hiſt. n.* 1069.

MALVA *ſylveſtris. Scopoli Fl. Carniol. n.* 859.

MALVA *ſylveſtris* folio ſinuato, *C. Bauhin. pin.* 314.

MALVA vulgaris *Parkinſon.*

MALVA *ſylveſtris Gerard. Raii Syn. p.* 269, Common Mallow. *Hudſon Fl. Angl. p.* 268.

RADIX perennis, albida, craſſitie digiti, in terram alte deſcendens, fibris paucis majuſculis inſtructa, ſapore dulci et viſcido prædita.

CAULIS plerumque erectus, pedalis ad tripedalem, teres, piloſus, ramoſus.

FOLIA petiolis prælongis hirſutis inſidentia, quinque aut ſeptemlobata, ad baſin maculâ purpurea ſæpe notata, ſubplicata, crenata, ſuperne lævia, ſubtus hirſutula.

FLORES ampli, purpurei, axillares, ſubumbellati, venis ſaturatioribus picti.

STIPULÆ duæ ad baſin cujuſvis petioli.

CALYX: PERIANTHIUM duplex, perſiſtens, hirſutum, exterius triphyllum, foliolis lanceolatis, *fig.* 1; interius ſemiquinquefidum, majus, laciniis ovato-acutis, *fig.* 2.

COROLLA: PETALA quinque, obcordata, præmorſa, baſi coalita, plana, *fig.* 3.

STAMINA: FILAMENTA plurima in tubum purpuraſcentem coalita, *fig.* 5, ſuperne laxa, reflexa: ANTHERÆ reniformes, albidæ, *fig.* 6, auct.

PISTILLUM: GERMEN orbiculatum: STYLUS cylindraceus, brevis: STIGMATA plurima, ſetacea, rubicunda, longitudine Styli, *fig.* 7, 8, 9.

SEMINA plurima reniformia *Arillo* introrſum dehiſcente tecta, *fig.* 10, 11.

ROOT perennial and whitiſh, the thickneſs of ones finger, ſtriking deep into the earth, thinly furniſhed with large fibres, and having a ſweetiſh viſcid taſte.

STALK generally upright, from one to three feet high, round, hairy and branched.

LEAVES ſtanding on long hairy foot-ſtalks, having five or ſeven lobes, often marked at bottom with a purple ſpot, ſomewhat folded, crenated or notched at the edges, ſmooth above and ſlightly hairy beneath.

FLOWERS large, purple, growing in a kind of umbell in the boſoms of the leaves, painted with deeper veins of the ſame colour.

STIPULÆ two at the bottom of each foot-ſtalk of the leaf.

CALYX: a double PERIANTHIUM continuing, and hairy; the outer one compoſed of three leaves, which are narrow and pointed, *fig.* 1; the inner one larger and divided into five ſegments, which are broader and pointed, *fig.* 2.

COROLLA: five PETALS heart-ſhaped, a piece of the apex as if bitten out, uniting at bottom, and flat, *fig.* 3.

STAMINA: FILAMENTS numerous, uniting into a purpliſh tube, *fig.* 5, above unconnected and turning back: ANTHERÆ kidney-ſhaped, and whitiſh, *fig.* 6, magnified.

PISTILLUM: GERMEN orbicular: STYLE cylindrical, and ſhort: STIGMATA numerous, thread-ſhaped, of a red colour, the length of the Styles, *fig.* 7, 8, 9.

SEEDS numerous, kidney-ſhaped, covered with an *Arillus* which opens inwardly, *fig.* 10, 11.

EVERY part of this plant, but more particularly the root, contains within it a juice ſomewhat mucilaginous, hence it has been ranked by writers on the *Materia Medica* among the emollients, and conſidered as ſerviceable in all caſes where emollients are proper: but it has more particularly been uſed in diſeaſes of the urinary paſſages, where the parts have been either injured by calculous concretions, or inflamed from other cauſes; as in the ſtone, gravel, bloody urine, ſtrangury, gonorrhæa, &c. In caſes of cough, hoarſneſs, roughneſs of the fauces, &c. it has alſo been recommended. Its uſe however has been much ſuperſeded by the *Marſhmallow*, which poſſeſſes all its valuable qualities in a ſuperior degree. The method of uſing it is by making a decoction of the leaves or root: or it may be made into a ſyrup in the manner of *Marſhmallows*. In fomentations and clyſters the leaves are alſo not unfrequently uſed.

Mallows were formerly eaten as food by the *Romans*; not the ſpecies here figured however; but according to HALLER, the *Malva rotundifolia italica flore amplo* of TOURNEFORT was uſed for this purpoſe. This author alſo informs us, that a tree of the *Mallow* kind is in like uſe with the *Egyptians*; and that the *Chineſe* mix dried *Mallow* leaves with their food.

Cattle do not appear to be fond of it; and as it is a ſtrong growing plant, it often does much harm in good rich ground: the root however, though perennial, is not of the creeping kind, and conſequently is eradicated without much difficulty. The beſt inſtrument will be found to be what is called a docking-iron, of which we ſhall give an account in deſcribing ſome one of the *Docks*; and the beſt time for taking them up is late in the Autumn, when the herbage being eat down pretty cloſe, the leaves of the *Mallow* are eaſily diſcerned, and the herbage ſuffers little from the operation.

The *Mallow* flowers from June to the end of Summer. The Antheræ before the opening of the flower, while they are yet entire, afford a very pleaſing ſpectacle, and are figured by GREW, in a magnified ſtate, in his *Anatomy of Plants*.

Malva sylvestris

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N° 112

Fumaria officinalis

FUMARIA OFFICINALIS. COMMON FUMITORY.

FUMARIA *Linnæi. Gen. Pl.* DIADELPHIA HEXANDRIA.

Cal. diphyllus, *Cor.* ringens. *Filamenta* 2, membranacea, ſingula *Antheris* 3.

Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

FUMARIA *officinalis* pericarpiis monoſpermis racemoſis, caule diffuſo. *Linnæi. Syſt. Vegetab. p.* 430. *Sp. Pl. p.* 984. *Fl. Suecic. p.* 245.

FUMARIA foliis multifidis; lobis ſubrotunde lanceolatis; fructibus monoſpermis. *Haller. hiſt. helv. n.* 346.

FUMARIA *officinalis. Scopoli Fl. Carniol. p.* 47.

FUMARIA officinarum et Dioſcoridis. *Bauhin pin.* 143.

FUMARIA purpurea. *Gerard. emac.* 1088.

FUMARIA vulgaris. *Parkinſon.* 287. *Raii Syn. p.* 284, Fumitory. *Hudſon Fl. Angl. p.* 270. *Lightfoot Fl. Scot. p.* 379.

RADIX annua, fibroſa, ex flavo-fuſca.

CAULES dodrantales aut cubitales, diffuſi, anguloſi, geniculis tumidis, ramoſi, glabri, teneri, ſubflexuoſi.

FOLIA alterna, petiolata, duplicato-pinnata, glauca, pinnulis trilobatis, mucronatis, lobis extimis bifidis aut trifidis.

FLORES racemoſi, purpurei, racemi erecti, multiflori, floribus ſparſis, pedunculatis, pedunculis clavatis.

BRACTEÆ lanceolatæ, apice purpureæ, ſingulo pedunculo ſubjectæ, *fig.* 1.

CALYX: PERIANTHIUM diphyllum; foliolis oppoſitis, æqualibus, lateralibus, acutis, denticulatis, deciduis, *fig.* 2, 3.

COROLLA oblonga, ringens, palato prominente faucem claudente. *Labium ſuperius* apice dilatatum, carinatum, ſubtus concavum, margine paululumreflexâ, baſi obtuſâ, incurvatâ. *Labium inferius* longitudine labii ſuperioris et ſimile quoad apicem, cæteroquin lineare, baſi paulo latiore. *Petala lateralia* ſive alæ apice cohærent faucemque tetragonam efformant ſupra infraque tridentatam, *fig* 4, 5, 6, 7.

STAMINA: FILAMENTA duo, alba, membranacea, baſi lata, germen amplectentia: ANTHERÆ tres, flaveſcentes in ſingulo filamento, terminales, *fig.* 8.

PISTILLUM: GERMEN ovatum: STYLUS filiformis longitudine ſtaminum, adſcendens: STIGMA compreſſum, villoſum, *fig.* 9.

PERICARPIUM Silicula unilocularis, ſubcordata, *fig.* 10.

SEMEN unicum, ſubrotundum, *fig.* 11.

ROOT annual, fibrous, of a yellowiſh brown colour.

STALKS from nine to ſeventeen inches in height, ſpreading, angular, enlarged at the joints, branched, ſmooth, tender, and ſomewhat bending.

LEAVES alternate, ſtanding on foot-ſtalks, twice pinnated, of a blueiſh green colour, the pinnulæ or little leaves trilobate, terminating in a ſhort point, the outermoſt lobes bifid or trifid.

FLOWERS growing in a kind of ſpike, of a purple colour; ſpikes upright, ſupporting many flowers, which are placed, without any regular order, on foot-ſtalks, thickeſt at the extremity.

FLORAR-LEAF lanceolate, and purple at top, placed under each flower-ſtalk, *fig.* 1.

CALYX: a PERIANTHIUM of two leaves, the leaves oppoſite, æqual, lateral, pointed, with little teeth at the edges, and deciduous, *fig.* 2, 3.

COROLLA oblong, ringent, the palate prominent, and cloſing the mouth: *upper lip* dilated at the tip, keel-ſhaped, hollow beneath, the margin turning a little upwards; the baſe obtuſe, and curled inward: the *lower lip* the ſame length as the upper one, and ſimilar as to the top, in other reſpects linear; the baſe a little broader: the *lateral Petals*, or wings, cohere at top, and form a four corner'd mouth, in which there are three diviſions on the upper and lower part, *fig.* 4, 5, 6, 7.

STAMINA: two white FILAMENTS, membranous, broad at bottom, and embracing the germen: ANTHERÆ three, of a yellowiſh colour, ſitting on the tops of the filaments, *fig.* 8.

PISTILLUM: GERMEN oval: STYLE thread-ſhaped, the length of the ſtamina, riſing upwards: STIGMA compreſſed, and villous, *fig.* 9.

SEED-VESSELL a ſmall Pod of one cavity, ſomewhat inverſely heart-ſhaped, *fig.* 10.

SEED one, of a roundiſh figure, *fig.* 11.

FUMITORY in its flower and fruit, has certainly a conſiderable affinity with the papilionaceous plants, although that affinity is not very obvious at firſt ſight: and at the ſame time, ſome parts of its ſtructure ſeem altogether peculiar to itſelf. The poſterior part of the corolla terminates in a kind of nectarium, like what we obſerve in the Violet. But the part in which it differs moſt from the papilionaceous flowers, is its calyx, which conſiſts of two ſmall lateral leaves, more like ſtipulæ than a calyx. The filaments, as in papilionaceous flowers, are diſtinctly divided into two bodies, on the top of each of which, in a very ſingular manner, are placed three antheræ, each ſtanding on a little footſtalk. The ſeed-veſſell in this ſpecies, has not much reſemblance to thoſe of the papilionaceous tribe; but in ſome of the other ſpecies it has a very conſiderable one, as in the *Claviculata*. This difference of ſtructure in the ſeed-veſſells, cauſed RAY to divide the plants of this genus, and place them in different claſſes: but by LINNÆUS they are claſſed together with the diadelphous plants.

When this plant grows luxuriantly, and near other plants, the leaves acquire a power of acting as tendrils, and ſupporting the plant: this is the principal variety to which it is ſubject.

It grows very commonly in corn-fields, gardens, and on the ſides of banks; flowering from April to July.

The juice of it given to two ounces, with whey, gently opens the body, purifies (as it is called) the blood, reſiſts the ſcurvy, removes eruptions of the ſkin, and a too great redneſs of the face, if exerciſe in the ſpring be joined with it. The extract, or inſpiſſated juice of it, appears to be the moſt eligible form, of which one dram looſens the belly; *Haller. hiſt. helv. p.* 150.

Kine and Sheep eat it; Goats not readily; Horſes and Swine not at all.

TRIFOLIUM ORNITHOPODIOIDES. BIRDS-FOOT TREFOIL.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ornithopodioides* leguminibus nudis octoſpermis ſubternis, calycibus duplo longioribus, caulibus declinatis. *Linnæi Syſt. Vegetab. p.* 571. *Sp. Pl.* 1078.

MEDICAGO leguminibus ternatis, erectis, recurvis, deſcendentibus, pedunculo communi. *Hort. Cliff.* 376.

TRIFOLIUM ſiliquoſum loto affine ſiliquis ornithopodii. *Pluk. phyt. t.* 68. *fig.* 1.

FÆNUMGRÆCUM humile repens, ornithopodii ſiliquis brevibus erectis. *Raii Syn. p.* 331, Fenugreek with Birds-foot Trefoil Pods, *tab.* 14. *fig.* 1. *Hudſon Fl. Angl. p.* 282. *Oeder Fl. Dan. icon.* 368. *Lightfoot Fl. Scot. p.* 403.

RADIX ſimplex, albida, fibroſa, tuberculis obſita.

CAULES plures, procumbentes, in humidiore aut pinguiore ſolo palmares aut ſeſquipalmares alias vix quandrantales, craſſiuſculi, et ſubrigidi.

FOLIA perexigua, terna, obcordata, profunde denticulata et veluti eroſa, lævia, venis rectis non ramoſis, *fig.* 7.

STIPULÆ ad baſin foliorum binæ, magnæ, venoſæ, acuminatæ.

FLORES axillares, carnei, pedunculis breviſſimis inſidentes, terni, bini aut etiam ſolitarii.

CALYX: PERIANTHIUM tubuloſum, quinquedentatum, perſiſtens, læve, ſtriatum, dentibus acuminatis, nudis, duobus ſuperioribus longioribus, *fig.* 1.

COROLLA papilionacea: VEXILLUM reflexum: ALÆ divergentes, *fig.* 2.

PISTILLUM: GERMEN oblongum, villoſum, *fig.* 3.

PERICARPIUM: LEGUMEN magnum, calyce duplo longius, apice mucronatâ incurvâ, in duas valvulas ægre dehiſcens, *fig.* 4, 5.

SEMINA ſex ad decem, difformia, pallida, maculata, *fig.* 6.

ROOT ſimple, whitiſh, fibrous, and beſet with little knobs or tubercles.

STALKS numerous and procumbent, in a moiſt or rich ſoil from four to ſix inches in length, but moſt commonly from two to three, thickiſh for the ſize of the plant, and ſomewhat rigid.

LEAVES very ſmall, growing by threes, inverſely heart-ſhaped, deeply notched, ſo as to appear as if gnawed, ſmooth, the veins ſtraight, and not branched, *fig.* 7.

STIPULÆ at the baſe of the leaves two, large, veiny, and pointed.

FLOWERS axillary, pale red, ſitting on exceedingly ſhort foot-ſtalks, growing three or two together, ſometimes ſingly.

CALYX: a PERIANTHIUM which is tubular, with five teeth, permanent, ſmooth, ſtriated, the teeth acuminated, naked, the two uppermoſt longeſt, *fig.* 1.

COROLLA papilionaceous; the STANDARD turning back; and the WINGS ſeparating, *fig.* 2.

PISTILLUM: GERMEN oblong and villous, *fig.* 3.

SEED-VESSEL, a large LEGUMEN, twice the length of the Calyx, the tip ending in a point and bending downward, with difficulty ſplitting into two valves, *fig.* 4, 5.

SEEDS from ſix to ten, irregular, pale and ſpotted, *fig.* 6.

THIS little plant is perhaps more common in this country than is generally imagined, and has probably been overlooked from its minuteneſs.

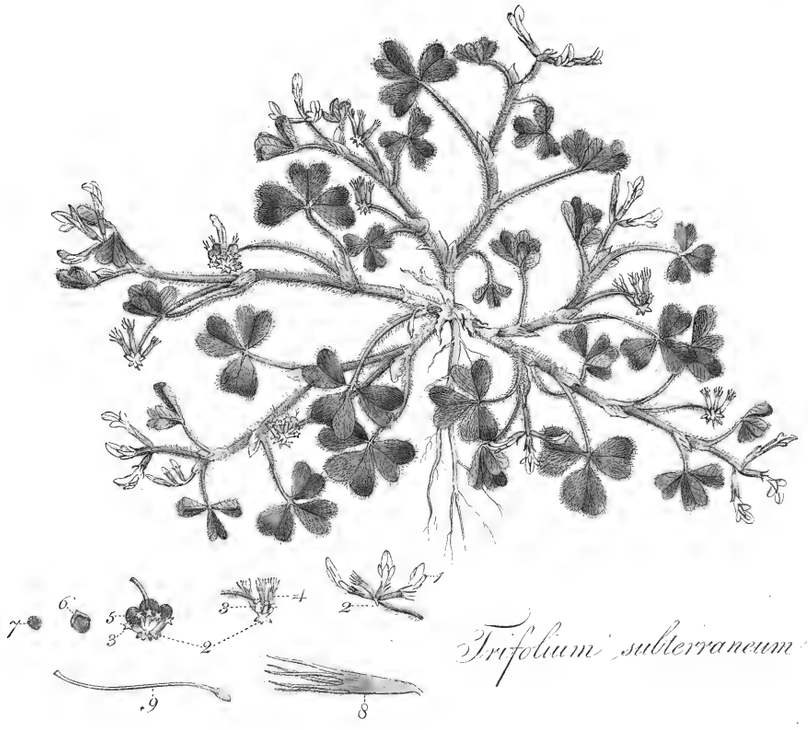
It appears to delight in a dry, expoſed, gravelly or ſandy ſoil, in which the *Arenaria rubra*, *Trifolium ſubterraneum*, *Feſtuca ovina*, and *Sagina erecta* uſually grow.

I have found it plentifully in *Tothill-fields*, *Weſtminſter*, and on *Blackheath*. Mr. HUDSON mentions its growing near *Penzance*, in *Cornwall*; and Mr. LIGHTFOOT in *Scotland*.

This plant is not like the *Trifolium ſubterraneum*, ſtrikingly viſible at a diſtance, but is to be diſcovered only by carrying the eye near the ground. When once found, there is no difficulty in diſtinguiſhing it from the other ſpecies. Its leaves are ſmooth, and much notched or gnawed at the edges; its flowers are pale red; its ſeed-veſſels remarkably large, and growing moſt commonly two or three together, in which ſtate they ſomewhat reſemble a bird's claw, but not in ſo great a degree as the *Ornithopus*, or *true Birds-foot* does: the ſeed-veſſels are ſometimes ſingle.

Cultivated in a garden, it grows to a much larger plant than is repreſented on the plate.

Trifolium ornithopoides



Trifolium subterraneum

TRIFOLIUM SUBTERRANEUM. SUBTERRANEOUS TREFOIL.

TRIFOLIUM *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longius, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *ſubterraneum* capitulis villoſis ſubquinqueflоris, coma centrali reflexa rigida fructum obvolvente. *Linnæi Syſt. Vegetab. p.* 572. *Sp. Pl. p.* 1080.

TRIFOLIUM pumilum ſupinum, floſculis longis albis. *Ph. Brit. Raii Syn. p.* 327. *tab.* XIII. *fig.* 2.

TRIFOLIUM parvum Monſpeſſulanum album cum paucis floribus. *I. Bauhin.* II. 380.

TRIFOLIUM album tricoccum ſubterraneum reticulatum. *Moriſon. Hiſt. Ox.* II. 138. *ſ.* II. *t.* 14. *f.* 5.

TRIFOLIUM *ſubterraneum* ſeu folliculos ſub terram condens. *Magnol. Botan. Monſp.* 265. *Gouan Fl. Monſp. p.* 198.

Hudſon. Fl. Angl. p. 286. *ed.* 2. *p.* 328.

RADIX annua, ſimplex, fibroſa.
CAULES teretes, craſſiuſculi, ramoſi, procumbentes et terræ velut appreſſi, villoſi.

STIPULÆ ovato-lanceolatæ, nervoſæ.
PETIOLI pedunculis paulo longiores, denſe piloſi.

FOLIA terna, obcordata, mollia, villoſa, integerrima, maculis purpureis ſæpe variegata.

PEDUNCULI triflori aut quadriflori, peractâ floreſcentiâ verſus terram inflexi.

FLORES albi, longi, procul conſpicui.

CALYX: PERIANTHIUM oblongum, tubulatum, ſuperne rubrum, quinquedentatum, dentibus ſetaceis, piloſis, longitudine tubi, *fig.* 8, auct.
COROLLA oblonga, calyce duplo longior, alba: VEXILLUM venis dilute purpureis ſtriatum: ALÆ conniventes, vexillo breviores: CARINA parva, brevis, alis incluſa, *fig.* 1.

PISTILLUM: GERMEN ovatum: STYLUS longus, tenuis, adſcendens: STIGMA ſubrotundum, *fig.* 9.
PERICARPIUM: LEGUMEN ſubrotundum, monoſpermum, *fig.* 6.
SEMEN magnum, nitidum, ſpadiceum, *fig.* 7.
OBS. peractâ floreſcentiâ, pedunculi verſus terram deflectuntur, et filamenta alba radiculis æmula extremitatibus ſuis exſerunt, *fig.* 2. hæ vero terram nequaquam penetrant, at ſurſum eriguntur, mox apices ſtellatim expanduntur, *fig.* 3. et demum pericarpia obvolvunt, *fig.* 5.

ROOT annual, ſimple, and fibrous.
STALKS about three inches in length, frequently much longer, round, thickiſh, branched, procumbent, and as it were preſſed to the ground, covered with ſoft hairs.
STIPULÆ oval, pointed, and ribbed.
LEAF-STALKS a little longer than the flower-ſtalks, and thickly covered with hairs.
LEAVES growing by threes, inverſely heart-ſhaped, ſoft, villous, intire at the edges, and frequently variegated with purple ſpots.
FLOWER-STALKS ſupporting three or four flowers, and bending towards the earth as they decay.
FLOWERS white, long, and conſpicuous at a diſtance.
CALYX: a PERIANTHIUM oblong, tubular, on the upper part red, having five long ſlender hairy teeth the length of the tube, *fig.* 8, mag.
COROLLA oblong, twice the length of the calyx, white: STANDARD ſtriped with faint purple veins: WINGS cloſing, ſhorter than the ſtandard: KEEL ſmall, incloſed within the wings, *fig.* 1.
PISTILLUM: GERMEN oval: STYLE long, ſlender, aſcending: STIGMA roundiſh, *fig.* 9.

SEED-VESSEL: a roundiſh POD containing one ſeed, *fig.* 6.
SEED large, ſhining, of a purpliſh colour, *fig.* 7.
OBS. The flowering being over, the flower-ſtalks are bent towards the earth, and from their extremities put forth white filaments like roots, *fig.* 2. theſe do not however penetrate the earth, but riſe upwards, their tips ſoon expanding into little ſtars, *fig.* 3. and finally incloſe the ſeed-veſſels, *fig.* 5.

NOTWITHSTANDING this plant appears to have obtained its name of *ſubterraneum* from a miſapprehenſion of its oeconomy, we have choſen to retain it, rather than introduce confuſion by altering a name ſo long eſtabliſhed, eſpecially as it has a tendency to excite an enquiry into the hiſtory of the plant.

RAY, in his *Hiſt. Pl.* has given a very accurate deſcription of this plant, and related every circumſtance which takes place in its oeconomy with his uſual preciſion, except the following; "Floſculis delapſis aut marceſcentibus "*calices* ad pediculum reflectuntur et *capitula ſub terra condunt.*" Here he aſſerts, that the capituli or little heads, are buried in the earth by means of the calyces or flower cups, but does not explain in what manner. In the third edition of his *Synopſis*, publiſhed by DILLENIUS, in a note added to this plant, contained in a parentheſis, the following account occurs: "Calices floſculis exaridis deorſum tendunt, radiceſque extremitatibus ſuis agere vi- "dentur, mox vero laciniis eorum ſurſum verſis *peculiaribus fibris humo affiguntur*, quo tempore unum alterumve "ſemen terreni humoris beneficio intumeſcit, novæque plantæ productioni inſervit." Here is an attempt to account for the manner in which the heads are buried, founded however on a miſtaken obſervation; for notwithſtanding what authors have related, the ſeeds are not buried in any unuſual way, nor is there any apparatus to effect it.

It muſt be allowed, that on the firſt examination of this plant, one would be tempted to think that young roots did actually ſpring from ſome part of the ſeed as it lay on the ground connected with the plant; but a more ſtrict obſervation would diſcover, that thoſe white filaments which have the appearance of roots, were not roots in reality; that they ſprung from the end of the foot-ſtalk which ſupports the flowers, and not from either the calyx or ſeed; that inſtead of penetrating into the earth, they ſoon turned upward, put on a ſtar-like appearance at their extremities, and finally incloſed the ſeed-veſſels in a kind of prickly head.

There is certainly ſomething very extraordinary in this proceſs of nature, yet it does not appear to be uſeful in any other way, than as affording ſome kind of ſecurity to the ſeeds, which have not that thick coriaceous covering afforded to many of the Trefoils.

This ſpecies, from theſe ſingular circumſtances, is eaſily diſtinguiſhed from the others. It is not mentioned either by HALLER, SCOPOLI, or LINNÆUS in his *Fl. Suecic.* but occurs in GOUAN'S *Fl. Monſpeliac.*

It grows with us in expoſed gravelly ſituations, particularly on heaths, and is diſtinguiſhable even at a diſtance by its white bloſſoms. It occurs on many parts of *Black-heath*; and flowers in June, July, and Auguſt.

TRIFOLIUM FRAGIFERUM STRAWBERRY TREFOIL.

TRIFOLIUM. *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Flores ſubcapitati. *Legumen* vix calyce longior, non dehiſcens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM fragiferum ſpicis ſubrotundis, calycibus inflatis bidentatis reflexis, caulibus repentibus. *Linnæi Syſt. Vegetab p.* 574. *Sp. Pl. p.* 1086. *Fl. Suecic. p.* 26.

TRIFOLIUM caule repente; ſpicis glabris; calycibus ſericeis, ampullaſcentibus. *Haller. hiſt. n.* 370.

TRIFOLIUM fragiferum *Scopoli Fl. Carniol n.* 933.

TRIFOLIUM fragiferum friſicum. *Bauhin pin.* 329.

TRIFOLIUM fragiferum *Gerard. emac.* 1208.

Raii Syn. 329. Strawberry Trefoil.

Hudſon Fl. Angl. p. 286.

RADIX perennis, ſimplex, alba, granulis obſita.
CAULES repentes, purpuraſcentes, in longum extenſi, ramoſi, teretes, læves.
STIPULÆ ovato-acuminatæ, reticulatæ.
PEDUNCULI ſolitarii, longi, teretes, læves, erectiuſculi.
CAPITULI floriferi parvi, ſubrotundi, Trifolii repentis æmuli, at minores, et magis purpurei; his ſuccedunt Capituli fructiferi, rotundi, carnei, magnitudine nucis myriſticæ parvæ, Fragariis mentientes.

FOLIA terna, petiolis hirſutulis inſidentia, obovata, lævia, juniora vero leniter hirſuta, acute ſerrata, mucronata, venis ad marginem divaricantibus.

CALYX: INVOLUCRUM polyphyllum, foliolis ſetaceis, PERIANTHIUM tubuloſum, villoſum, ſupra gibboſum, quinquedentatum, dentibus tribus inferioribus æqualibus acuminatis viridibus, duobus ſuperioribus paulo longioribus, ſubulatis, rigidulis, apicibus rufis, *fig.* 2. 3. 4. pars gibboſa calycis demum mire mutatur, augetur, inflatur, reticulata fit, et pericarpium obtegit; dentes vero retinet. *fig.* 8.

COROLLA papilionacea, purpurea; VEXILLUM Alis longior, compreſſum, lineis roſeis pictum; ALÆ breves, minimæ; CARINA Alis brevior; *fig.* 2: unuſquiſque floſculus paleâ concava, ſubulata, ſuffulcitur. *fig.* 1.

STAMINA ut in pleriſque hujus generis; ANTHERÆ flavæ. *fig.* 6.
PISTILLUM: GERMEN ovatum: STYLUS longitudine ſtaminum: STIGMA capitatum. *fig.* 7.
PERICARPIUM: LEGUMEN ovatum compreſſum diſpermum aut monoſpermum, calyce inflato obtectum. *fig.* 9. 10.
SEMEN ovato-reniforme, nitidum. *fig.* 11.

ROOT perennial, white, beſet with little grains.
STALKS creeping, purpliſh, extending to a conſiderable length, branched, round, and ſmooth.
STIPULÆ oval, with a long point, and reticulated.
FOOT-STALKS of the flowers, ſingle, long, round, ſmooth, and nearly upright.
HEADS of the flowers ſmall, roundiſh, like thoſe of the Creeping or Dutch Clover, but ſmaller and more purple: to theſe ſucceed the heads containing the fruit, which are round, fleſh coloured, the ſize of a ſmall nutmeg, and very much reſembling Strawberries.
LEAVES growing three together, ſitting on foot-ſtalks, ſlightly hairy, inverſly oval, ſmooth; the younger ones ſometimes hairy, ſharply ſerrated, and terminating in a ſhort point; the veins divaricating at the margin.
CALYX: INVOLUCRUM conſiſting of many ſetaceous folioli or little leaves: PERIANTHIUM tubular, villoſe, gibbous above, having five teeth, the three lowermoſt of which are equal, with long green points, the two uppermoſt a little longer, with tapering rigid reddiſh points, *fig.* 2. 3. 4. the gibbous part of the calyx at length becomes wonderfully changed, increaſed, ſwollen, reticulated, and covers the pericarpium; ſtill however retaining its teeth. *fig.* 8.
COROLLA papilionaceous, and of a purple colour; the VEXILLUM longer than the Alæ, flat and ſtreaked with roſe-coloured lines; the WINGS ſhort and very ſmall; the KEEL ſhorter than the Wings. *fig.* 2. each floſcule is ſupported by a ſmall, tapering, hollow leaf, or palea. *fig.* 1.
STAMINA like moſt of thoſe in this genus: ANTHERÆ yellow. *fig.* 6.
PISTILLUM: GERMEN oval: STYLE the length of the Stamina: STIGMA forming a little head. *fig.* 7.
SEED-VESSEL: an oval, flatten'd Legumen, containing one or two ſeeds, and cover'd over with the inflated calyx. *fig.* 9. 10.
SEED of an oval kidney ſhape and ſhining. *fig.* 11.

The beautiful Strawberry like appearance of the capituli or little heads, containing the ſeed of this plant, and which ariſe from a very peculiar circumſtance, the inflation or enlargement of the calyx after the bloſſom is over, in a very ſtriking manner diſtinguiſhes this ſpecies from the *Trifolium repens*, to which in its general habit it is very nearly allied. It differs from the *repens* alſo in ſeveral other reſpects; the whole plant is ſmaller; the bloſſoms are of a more purple hue; its place of growth is alſo ſomewhat different: the *repens* ſeems to delight in a dry gravelly ſoil, the *fragiferum* on the contrary, moſt uſually occurs in a moiſt ſituation; nor is it ſo common a plant as the *repens*; yet it abounds in many places about London. I have obſerved it plentifully in the lanes about *Hornſey*, alſo near *Pancras*, and in many other parts. It flowers and produces its ſeeds in Auguſt.

It may with great eaſe be cultivated in a Garden, if it ſhould be thought worthy a place there.

HALLER quotes an Author, * who ſays, they have begun to cultivate it in Ireland for Cattle, and that when ſown, it has grown to the length of ſeven feet: without controverting this fact, which borders a little on the incredible, we would obſerve, that the *Dutch Clover* is certainly a much ſtronger plant, and to be preferred in a dry ſituation: in moiſt ſituations, there are many of the Graſſes which may be cultivated to far greater advantage, as neither of theſe Trefoils produce much of a crop 'till late in the Summer.

* BAKER Experim. p 98.

Trifolium fragiferum

Lotus corniculatus

LOTUS CORNICULATUS. BIRDS-FOOT TREFOIL.

LOTUS *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Legumen cylindricum, ſtrictum. *Alæ* ſurſum longitudinaliter conniventes. *Cal.* tubuloſus.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

LOTUS *corniculatus* capitulis depreſſis, caulibus decumbentibus, leguminibus cylindricis patentibus. *Lin. Syſt. Vegetab. p.* 576.

LOTUS floribus umbellatis; ſiliquis cylindricis; rectiſſimis. *Haller. hiſt. helv. p.* 572. *n.* 3.

LOTUS *corniculatus*. *Scopoli Fl. Carniol. p.* 86.

LOTUS ſive melilotus pentaphyllos minor glabra. *Bauhin Pin.* 332.

TRIFOLIUM ſiliquoſum minus. *Gerard. emac.* 1191. *Raii Syn.* 334, Birds-foot Trefoil. *Hudſon Flor. Angl. p.* 288. *Lightfoot Flor. Scot. p.* 411.

RADIX perennis, ſubfuſiformis, in terram alte deſcendens.

CAULES plurimi, tenues, procumbentes, ſubquadrati, pedales, ramoſi.

FOLIA terna, ovata, mucronata, foliolo medio baſi anguſtata, glabra aut hirſutula.

STIPULÆ duæ, foliis quodammodo ſimiles at magis latæ et acuminatæ.

FLORES ſubumbellati, ad 12, petiolis nudis longis inſidentes.

CALYX: PERIANTHIUM tubuloſum: infra medium annulo prominulo cinctum, quinquedentatum, dentibus ſetaceis, hirſutulis, duobus ſuperioribus ſurſum tendentibus, tribus inferioribus reflexis, *fig.* 1.

COROLLA papilionacea, flava: VEXILLUM reflexum, ſuperne aurantiacum, interne ad baſin lineis octo circiter notatum: ALÆ duæ, flavæ, apicibus obtuſis: CARINA inferne gibba, adſcendens, acuminata, *fig.* 2.

STAMINA: FILAMENTA decem, novem in tubum coalita, ſimplici libero, apicibus omnium dilatatis, albis: ANTHERÆ parvæ, flavæ, *fig.* 3, 4, 5, 6.

PISTILLUM: GERMEN tenue, teretiuſculum, incurvum: STYLUS adſcendens, rectus: STIGMA minimum, *fig.* 7, 8, 9.

PERICARPIUM: LEGUMEN cylindricum, bivalve, iſthmis quaſi interceptum, more raphani, *fig.* 10.

SEMINA plurima, ultra XX, parva, ſubreniformia, maculata, *fig.* 11, 12.

ROOT perennial, tapering, ſtriking deeply into the earth.

STALKS ſeveral, ſlender, procumbent, ſomewhat ſquare, a foot in length, and branched.

LEAVES growing three together, ovate, terminating in a ſhort point, the middle leaf narrowed at its baſe, ſmooth or ſlightly hirſute.

STIPULÆ two, in ſome degree like the leaves, but broader, and more pointed.

FLOWERS growing ſomewhat in the form of an umbell, to twelve, ſitting on long foot-ſtalks.

CALYX: a PERIANTHIUM tubular, below the middle ſurrounded by a prominent ring, having five teeth, which are ſetaceous and a little hairy, the two uppermoſt riſing upward, the three lowermoſt bending back, *fig.* 1.

COROLLA papilionaceous and yellow: the VEXILLUM turned back; on its upper part of an orange colour, underneath, at its baſe, marked with about eight lines: WINGS two, yellow and blunt at the tips: KEEL gibbous below, riſing upwards, and pointed, *fig.* 2.

STAMINA: ten FILAMENTS, nine uniting in a tube; the ſingle one looſe; the tips of all of them dilated, and white: ANTHERÆ ſmall and yellow, *fig.* 3, 4, 5, 6.

PISTILLUM: GERMEN ſlender, roundiſh, and bent downward: STYLE riſing upwards, and ſtraight: STIGMA very minute, *fig.* 7, 8, 9.

SEED-VESSEL: a cylindrical LEGUMEN of two valves, divided into a kind of cells, ſomewhat in the manner of the Radiſh, *fig.* 10.

SEEDS numerous, more than twenty, ſmall, ſomewhat kidney-ſhaped, and ſpotted, *fig.* 11, 12.

THE following extract relative to this plant, is ſelected from the firſt volume of Mr. ANDERSON's *Eſſays relating to Agriculture and rural affairs, page* 419.

While the practical remarks, and judicious hints, ſcattered through this performance, ſhew the author to be a man of real genius, and far ſuperior to the common run of writers on theſe ſubjects, we cannot but regret, that a want of botanic knowledge pervades the whole, and in ſome degree, defeats the laudable deſign of the ingenious eſſayiſt. In no one plant, is this inaccuracy more obſervable than in the preſent, which we ſhall point out; hoping, that as the author has in ſome parts of his work, ſhewn himſelf well acquainted with chemical knowledge, ſome future edition may demonſtrate, that he thought *Botany* equally worthy of his attention.

" MILK-VETCH, liquorice-vetch, or milk-wort, as it is differently called,—the **Aſtragalus glycyphyllos* of Hudſon, " is a plant common in every part of the iſland; although it has never yet, that I have heard of, been attempted " to be cultivated."

" The general appearance of this humble plant, is, in ſome reſpects, very like that of the common white- " clover; although its leaves upon a nearer examination are not exactly ſimilar to them. From the top of the " root

*It is very evident, from the whole tenor of the authors deſcription, that he has given a wrong name to the plant he wiſhed to recommend. The plant he deſcribes, is the *Lotus corniculatus* of HUDSON, or *Birds-foot Trefoil*, and not the *Aſtragalus Glycyphyllos*, or *Liquorice-Vetch*, which is by no means a common plant.

" root there comes out in the ſpring a great number of ſmall ſhoots that ſpread along the ſurface of the ground " every way around it; from which ariſe a great many cluſters of bright yellow flowers, exactly reſembling thoſe " of common broom in ſhape, ſize and colour; which are ſucceeded by hard round pods, filled with ſmall kidney- " ſhaped ſeeds. And as three or four of theſe pods uſually adhere to one foot-ſtalk, from which they ſpread open " at the points, a little reſembling the fingers of an open hand; they have from this circumſtance been by the vul- " gar in ſome places called ladies-fingers; while others more ſtruck with the reſemblance that theſe pods bear to " the foot of a bird, have diſtinguiſhed it by the name of crow-toes; and others from the appearance of the bloſ- " ſom and the part where the plant is found, have called it *feal*, or by corruption *fell* broom. It is found plenti- " fully almoſt every where in old graſs-fields; but as every ſpecies of domeſtic animal eats it, almoſt in preference " to every other plant, it is ſeldom allowed to come to flower in paſture grounds, unleſs where they have " been accidentally ſaved from the cattle for ſome time; ſo that it is only about the borders of corn-fields, or the " ſides of incloſures to which cattle have not acceſs, that we have an opportunity of obſerving it. As it has been " imagined that the cows which feed on theſe paſtures where this abounds, yield a great quantity of rich milk, " the plant has from that circumſtance obtained its moſt proper Engliſh name of milk-vetch."

" But the circumſtance that firſt recommended it to my notice, was the having obſerved that it grows and flou- " riſhes in poor barren ground where almoſt no other plant can be made to live. I have ſeen it in the midſt " of a barren moor, where the ſoil was ſo poor that even heath, or ling *(erica communis)* could hardly grow, and " upon bare obdurate clays where no other plant could be made to vegetate; inſomuch that the ſurface remained " entirely uncovered, unleſs where a plant of this kind chanced to be eſtabliſhed; yet even in theſe unfavourable " circumſtances, it flouriſhed with an uncommon degree of luxuriance, and yielded as tender and ſucculent, though " not ſuch abundant ſhoots, which aſſumed as fine a verdure as if they had been reared in the richeſt manured fields. " I have likewiſe ſeen it in dry and barren ſands, where almoſt no other plant could be made to live; and there alſo " it ſends out ſuch a number of healthy ſhoots all round, as covers the earth with the cloſeſt and moſt beautiful " carpet that can be deſired."

" The ſtalks of this plant, as has been ſaid, are weak and ſlender, ſo that they ſpread upon the ſurface of the " ground, unleſs they are ſupported by ſome other vegetable. In ordinary ſoils, they do not grow to a great length, " nor produce a great many flowers,—branch out a good deal, but carry few or no flowers or ſeeds: and as I firſt " took notice of it only on poor ſoils, it was purely with a view to paſture that I firſt reſolved to cultivate it; and " with this intention ſowed it with my ordinary hay-ſeeds, expecting no material benefit from it till I deſiſted from " cutting my field; but found myſelf agreeably diſappointed, as it grew the firſt ſeaſon as tall as my great clover, " and formed the fineſt hay I ever ſaw; it being ſcarce diſtinguiſhable from Lucerne, but by the ſlenderneſs of the " ſtalk and proportional ſmallneſs of the leaf."

" It is nearly allied to Lucerne in its botanical characters; and reſembles that valuable plant in many other ref- " pects. Like it, it is perennial,—ſends down a long root to a great depth in the ſoil, which is at firſt ſmall and gra- " dually increaſes with age, till it at length becomes of a very conſiderable ſize; ſo that it is ſeveral years after it " is firſt ſowed before it attains its full perfection: but when it is once eſtabliſhed, it probably remains there for a " prodigious number of years in full vigour, and produces annually a great quantity of fodder. In autumn 1773, " I cut the ſtalk from an old plant of it that grew in a very indifferent ſoil; and after having dried it thoroughly, " found that it weighed fourteen ounces and a half. Like Lucerne, it is never affected with the ſevereſt droughts " that we experience: but it does not reſemble it in delicateneſs of conſtitution, as it thrives in the ſtiffeſt clays, " and is able to ſtand its ground among graſs or any other weeds."

" As this plant only produces ſeeds in abundance upon poor hungry ſoils that could hardly afford nouriſhment to " any other, and as the ſtalks ſpread out cloſe upon the ſurface of the ground, it ſeems to me, that the greateſt bar " to the cultivating thereof, will be the difficulty of obtaining the ſeeds in abundance; as in theſe circumſtances they " muſt always be gathered by the hand: but as it is an abiding plant, thoſe who have ſuch ſoils as moſt ſtand in " need of having plants of this ſort ſowed upon them, may be at a little trouble and expence to get them once *properly* " laid down with this graſs, as it will be only once that they will need to do it. But it is poſſible, that future ex- " perience may diſcover ſome eaſier way of procuring the ſeeds than hath as yet occurred to me.

" The ſtalks of this plant die down entirely in winter, and do not come up in the ſpring till the ſame time that " clover begins to advance; ſo that it can never be of uſe but as a ſummer paſture:—Neither does it advance very " faſt after it is cut down, or eat over even in ſummer.—But the great cloſeneſs of the ſhoots may probably counter- " balance that defect."

Whether this plant be deſerving of the encomiums here beſtowed on it, the practical farmer muſt determine. There appears no reaſon why ſeed might not be obtained from it, as well as from any of the other papilionaceous plants; and it ſhould ſeem, that thoſe ſorts of land which are not rich enough to bear Clover and other ſtrong growing plants, might be much improved by the introduction of the birds-foot Trefoil.

In wet and boggy ſituations this plant grows much taller and becomes very hairy.

The inſect called by LINNÆUS *Thrips glauca*, ſometimes renders the flowers tumid and monſtrous. *Lightf. Fl. Scot.*

Medicago- lupulina

MEDICAGO LUPULINA. HOP MEDICK.

MEDICAGO *Linnæi Gen. Pl.* DIADELPHIA DECANDRIA.

Legumen compreſſum, cochleatum. *Carina* corollæ a vexillo deflectens.

Raii Syn. Gen. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

MEDICAGO *lupulina* ſpicis ovalibus, leguminibus reniformibus monoſpermis, caulibus procumbentibus.

Linn. Syſt. Vegetab. p. 577. *Flor. Suecic. n.* 678.

MEDICA caule diffuſo, capitulis hemiſphæricis, ſiliquis reniformibus. *Haller hiſt. No.* 380. *v.* 1.

MEDICA *lupulina. Scopoli Fl. Carniol. No.* 940.

TRIFOLIUM pratenſe luteum, capitulo breviore. *Bauhin. pin.* 328.

TRIFOLIUM luteum lupulinum. *Gerard emac.* 1186. *Raii Syn.* 331. Melilot Trefoil.

TRIFOLIUM montanum lupulinum. *Parkinſon* 1105.

Hudſon. Fl. Angl. ed. 1. *p.* 282. *ed.* 2. *p.* 330.

Lightfoot. Fl. Scot.

RADIX biennis, fuſiformis, paucis fibrillis inſtructa, profunde penetrans.

CAULES procumbentes, numeroſi, pedales, ſubanguloſi, hirſutuli, ramoſi.

FOLIA terna, obcordata, aut obovata, obtuſiuſculè dentata, mucrone brevi latâ terminata, mollia, pubeſcentia, averſâ præcipue parte.

STIPULÆ duæ, ovato-lanceolatæ, acuminatæ, denticulatæ.

SPICULÆ primum ſubrotundæ, poſtea ovales, apicibus ſubincurvatis, baſi ad unum latus nudis.

CALYX: PERIANTHIUM monophyllum, ſubpiloſum, quinquedentatum, dentibus inæqualibus, tribus inferioribus longioribus, duobus ſuperioribus brevioribus, remotis.

COROLLA lutea, parva, Calyce longior; VEXILLUM reflexum, emarginatum, inferne patens; ALÆ et CARINÆ minimæ, ſubæquales.

STAMINA: FILAMENTA connexa: ANTHERÆ luteæ.

PISTILLUM: GERMEN ſubovatum compreſſum: STYLUS longitudine Staminum, craſſum, ſurſum curvatum: STIGMA capitatum.

PERICARPIUM: LEGUMEN reniforme, compreſſum, rugoſum, nigrum, ſpiraliter cochleatum, ſubvilloſum, *fig.* 1.

SEMEN unicum, ovatum, læve, flaveſcens, *fig.* 2.

ROOT biennial, tapering, furniſhed with few fibres, and penetrating deep into the earth.

STALKS procumbent, numerous, about a foot long, ſomewhat angular, ſlightly hairy, and branched.

LEAVES growing three together, inverſely heart or egg-ſhaped, ſomewhat bluntly indented, terminated by a broad ſhort point, ſoft, pubeſcent, particularly on the under ſide.

STIPULÆ two, ovato-lanceolate, acuminated, notched with little teeth.

SPICULÆ, firſt roundiſh, afterwards oval, the tips ſomewhat incurvated, and naked at bottom on one ſide.

CALYX a PERIANTHIUM of one leaf, ſomewhat hairy, having five teeth, which are unequal; the three lowermoſt longeſt; the two upper ones ſhorter, and remote from each other.

COROLLA yellow, ſmall, longer than the Calyx: STANDARD turning back, with a ſlight notch, ſpreading below: WINGS and KEEL very ſmall, and bending below.

STAMINA connected by the FILAMENTS: ANTHERÆ yellow.

PISTILLUM: GERMEN ſomewhat oval and flat: STYLE the length of the Stamina, thick, and bending upwards: STIGMA forming a little head.

SEED-VESSEL: a kidney-ſhaped LEGUMEN, flat, wrinkled, of a black colour, ſpirally twiſted, and ſlightly villous, *fig.* 1.

SEED ſingle, oval, ſmooth, and of a yellowiſh colour, *fig.* 2.

MANY of our *Trefoils* bear a conſiderable affinity to each other, and the preſent plant is often confounded with ſome of them: but ſimilar as it may be in its leaves, its parts of fructification will always direct the ſtudent aright in his inveſtigation of it; its ſeed-veſſels in particular, being totally different from thoſe of the *Trefoils. vid. fig.* 1, 2.

The leaves and ſtalks of this plant are frequently more hairy than thoſe *Trefoils* for which it is liable to be miſtaken, except the *ſubterraneum*, which is uſually ſmaller; and in general the more barren the ſoil in which this plant grows, the more downy does it appear: by culture it grows much larger and becomes ſmoother.

Its flowers are ſmaller and more cloſely compacted than thoſe of the *Trifolium agrarium* and *procumbens*, to both of which it bears a great ſimilarity; nor are the ſpikes ſo exactly round as in thoſe plants, but uſually of an oval, or oblong ſhape, particularly when ſomewhat advanced; and when the ſeeds are ripe, the plant is diſtinguiſhed at firſt ſight, by its black ſeed-veſſels.

The *Hop Medick* has of late years, been much cultivated in different parts of the kingdom; and in different counties, it has been diſtinguiſhed by different names, as thoſe of *Trefoil*, *Black Seed*, and *Non-ſuch*.

As the name of *Trefoil* tends to confound this plant with the true *Trefoils*, or GENUS *Trifolium*, I have ventured to call it *Hop Medick*, there being already a plant called *Hop Trefoil*, viz. *Trifolium agrarium*, which though not at preſent in culture, may perhaps be introduced at ſome future period.

The *Hop Medick* is often ſown by itſelf, and often with *Ray Graſs*; and though it does not produce ſo large a crop as the *Broad-leaved Clover*, it is ſuppoſed to afford a ſweeter one, and a food particularly adapted to Sheep.

Its natural ſituation is a dry one, and its ſoil ſandy, hence we find it wild on dry banks and on hilly paſtures, flowering in June and July. Its ſeed is ripe in Auguſt.

Sonchus oleraceus

SONCHUS OLERACEUS. COMMON SOWTHISTLE.

SONCHUS *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* imbricatus ventricosus. *Pappus* pilosus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO, NATURA PLENO LACTESCENTES.

SONCHUS *oleraceus* pedunculis tomentosis calycibus glabris. *Linnæi Syst. Vegetab. p.* 594. *Flor. Suecic. p.* 269. *Sp. Plant. p.* 1116.

SONCHUS foliis amplexicaulibus, dentatis, integris aut semipinnatis, calycibus lævibus. *Haller. hist. p.* 10. *n.* 21.

HIERACIUM *oleraceum. Scopoli Fl. Carniol. p.* 110.

SONCHUS lævis laciniatus latifolius. *Bauhin. Pin.* 124.

SONCHUS lævis. *Ger. emac.* 292.

SONCHUS vulgaris. *Parkinson.* 805.
Raii Syn. 162. *Hudson. Fl. Angl. p.* 294. *ed.* 2. *p.* 336.
Lightfoot Fl. Scot. p. 428.

RADIX annua, simplex, fibrosa, albida, lacteſcens.

ROOT annual, simple, fibrous, whitish, and milky.

CAULIS pedalis ad tripedalem, lævis, purpurascens, tener, fistulosus, ad basin teres superne subangulosus, ramosus.

STALK from one to three feet high, smooth, purplish, tender, hollow, at bottom round, towards the top somewhat angular, and branched.

FOLIA amplexicaulia, lævia, glauca, nervo medio purpurascente, *inferiora* pinnatifida, pinnarum paria duo aut tria, pinnis dentatis spinulo terminatis, lateralibus ovatis, terminali magno triangulari, *superiora* integra, ovato-acuta, basi lato.

LEAVES embracing the stalk, smooth, glaucous; the midrib purplish; the *lower ones* pinnatifid, consisting of two or three pair of pinnæ, which are indented, and each terminated by a little spine; the side ones oval, the end one large and triangular; the *upper leaves* intire, oval, pointed with a broad base.

PEDUNCULI tomentosi, per ætatem nudi.

FLOWER-STALKS downy, but becoming smooth by age.

CALYX communis ante floreſcentiam cylindraceus, et quasi truncatus, postea ventricoso-conicus, squamis plurimis, inæqualibus, lævibus, acuminatis, *fig.* 1, 2.

CALYX: the common Calyx before the flowering, cylindrical, and as it were cut off at top, afterwards bellying out, and forming a cone, covered with numerous smooth, unequal, pointed scales, *fig.* 1, 2.

COROLLA composita, imbricata, uniformis: FLOSCULIS monopetalis, ligulatis, quinquedentatis, *fig.* 3.

COROLLA compound, imbricated and uniform; the FLOSCULES monopetalous, the upper part flat, with five teeth, *fig.* 3.

STAMINA in cylindrum coalita: ANTHERÆ flavæ, apicibus nigricantibus.

STAMINA uniting into a cylinder: ANTHERÆ yellow, the tip blackish.

PISTILLUM: GERMEN subovatum: STYLUS filiformis, staminibus longior: STIGMATA duo, tenuia, patentia.

PISTILLUM: GERMEN nearly oval: STYLE filiform, longer than the Stamina: STIGMATA two, slender and spreading.

SEMEN oblongum, compressum, sulcatum, scabriusculum: PAPPUS sessilis, simplex, tenuissimus, *fig.* 4, 5.

SEED oblong, flattened, grooved, roughish: DOWN sessile, simple, very fine, *fig.* 4, 5.

RECEPTACULUM nudum, punctis prominulis scabrum, lucidum, *fig.* 6.

RECEPTACLE naked, rough with little prominent points, and shining, *fig.* 6.

THE *Sowthistle* is subject to many varieties, some of which have differed so much from the common appearance of this plant, as to have occasioned them to be considered as distinct species. Thus HALLER makes the *Sonchus asper*, or *prickly Sowthistle*, a distinct species: and the old Botanists formed several other species of it from different circumstances; as size, breadth, divisions of its leaves, &c. But the generality of Botanists seem now disposed to consider them all as the same, varying from soil, situation, &c. The prickly variety seems to be the only one that has any pretensions to be considered as distinct: but if any person will be at the pains to examine a garden overun with these plants, he will readily trace it into the smooth.

This plant appears to have been little regarded as a medicine; but as a favourite food of Hares and Rabbits, it is collected with great avidity.

It abounds most in gardens and cultivated ground; yet is sometimes met with on walls.

Being a large plant, and of quick growth, it is one of those which usually appear in neglected gardens, overunning most others, and proving more injurious to the slovenly gardener than the farmer.

It flowers chiefly in July, August, and September.

According to the experiments made by some of LINNÆUS's pupils, and published originally in the *Amænitates Academicæ*, it appears that it is eaten by Goats, Sheep, and Swine, but not relished by Horses.*

The young tender leaves are in some countries, boiled and eaten as greens; *Lightfoot Fl. Scot.*

*In the 2d. vol. of Essays relating to Agriculture and rural affairs, by Mr. ANDERSON, there is a translation of these experiments.

Tussilago Petasites

Sansom Sculpt

TUSSILAGO PETASITES. BUTTERBUR.

TUSSILAGO *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* ſimplex. *Cal.* ſquamæ æquales, diſcum æquantes, ſubmembranaceæ.

Raii Syn. Gen. 7. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES FLORE DISCOIDE.

TUSSILAGO *Petaſites* Thyrſo ovato, floſculis omnibus hermaphroditis. *Lin. Sp. Pl. p.* 1215. *Fl. Suecic. n.* 746.

PETASITES floribus denſe ſpicatis, floſculis androgynis. *Haller hiſt. n.* 143.

TUSSILAGO *Petaſites. Scopoli Fl. Carn. n.* 1058.

PETASITES major et vulgaris. *Bauh. p.* 197.

PETASITES *Gerard emac.* 814.

PETASITES vulgaris. *Parkinſon.* 419. *Raii Syn. p.* 179, Butterbur, Peſtilent-wort. *Hudſon. Fl. Angl.* 351. *ed.* 2. 364. *Lightfoot. Fl. Scot.* 477.

RADIX perennis, repens, albida, craſſitie digiti, multo etiam major in adultis plantis, horizontalis, fibras plurimas prælongas dimittens, verſus apicem ſenſim incraſſatas.

PETIOLI radicales, teretiuſculi, ſtriati, villoſi, canaliculati, baſi vaginati, purpuraſcentes.

FOLIA cordata, rotundata, margine inæqualiter dentata, denticulis rufis, inferne ſubtomentoſa, defloratâ plantâ increſcentia, tandem ampliſſima.

SCAPUS radicalis, ſpithamæus, teres, fiſtuloſus, albidus, tomentoſus, adſperſus ſquamis lanceolatis, purpuraſcentibus, nervoſis, inferioribus foliolo crenulato terminatis.

THYRSUS primum ovatus, dein oblongus, demum ſubconicus, pedunculis unifloris, bractæatis.

BRACTEÆ ad baſin pedunculorum lanceolatæ, apice purpuraſcentes, delicatulæ, longitudine pedunculi, *fig.* 1.

CALYX communis, turbinatus, lævis, ſquamis ſubæqualibus, lanceolatis, apice ſubincurvatis, *fig.* 2.

COROLLA compoſita; *corollulæ* omnes hermaphroditæ, tubuloſæ, *propria* pallide purpurea, infundibuliformis, tubo filiformi, elongato, limbo campanulato, quinquefido, laciniis reflexis, *fig.* 3.

ANTHERÆ purpureæ, in tubum coalitæ, *fig.* 4.

PISTILLUM: GERMEN teres, nudum: STYLUS albidus, antheris longior: STIGMA craſſum, album, bifidum, *fig.* 5.

SEMINA oblonga, marcida, nigricantia, ſterilia, pappo ſimplici coronata, *fig.* 6.

RECEPTACULUM nudum.

ROOT perennial, creeping, whitiſh, the thickneſs of ones finger, or much larger in full grown plants, running horizontally, and ſending down numerous long fibres, which grow thicker towards the extremity.

LEAF-STALKS proceeding from the root, roundiſh, ſtriated, villous, hollow on the inſide, forming a ſheath at bottom, and purpliſh.

LEAVES heart-ſhaped, rounded, the edge unequally indented, the teeth reddiſh, underneath ſomewhat woolly, growing very large after the plant has flowered.

SCAPUS proceeding from the root, about ſeven inches high, round, hollow, whitiſh, woolly, covered with lanceolate ſcales or leaves of a purpliſh colour, ribbed, the lower ones often terminating in a ſmall notched leaf.

THYRSUS firſt oval, then oblong, laſtly nearly conical: the flower-ſtalks ſupporting one flower each, and furniſhed with floral-leaves.

FLORAL-LEAVES at the baſe of the flower-ſtalks lanceolate, purpliſh at top, delicate, and the length of the flower-ſtalk, *fig.* 1.

CALYX common to many florets, broad at top, and ſmall at bottom, ſmooth, the ſcales or leaves nearly equal, lanceolate, and bending in ſomewhat at top, *fig.* 2.

COROLLA compoſed of many florets, all of which are hermaphrodite and tubular, of a pale purple colour, and funnel-ſhaped; the tube long and ſlender; the brim bell-ſhaped, divided into five ſegments, which are turned back, *fig.* 3.

ANTHERÆ purple, united into a tube, *fig.* 4.

PISTILLUM: GERMEN round and naked: STYLE whitiſh, longer than the Stamina: STIGMA thick, white, and bifid, *fig.* 5.

SEEDS oblong, withered, blackiſh, ſterile, crowned with ſimple down, *fig.* 6.

RECEPTACLE naked.

THE *Butterbur* though differing widely from the *Coltsfoot* in the appearance of its bloom, yet agrees with it in many particulars; the root eſpecially, poſſeſſes the ſame power of increaſing the plant, by creeping under the earth to a very great diſtance; hence when once introduced into a garden, it is ſcarce to be rooted out, eſpecially if the ſoil be a moiſt one. Was it not for this pernicious effect, the beautiful mode of its flowering, joined to its early appearance, would entitle it to a place in the gardens of the curious.

The bloſſoms, like thoſe of the *Coltsfoot*, make their appearance before the leaves. If the ſpring be mild, the ſpike will be formed by the middle of March; but April is the month in which it oftener blows.

It does not, like the *Coltsfoot*, expand its pappus or down, but the flowers change to a dirty brown colour; and the ſeeds on examination, appear altogether barren. It appears difficult to account for the cauſe of this ſterility, as the parts of the fructification ſeem evidently perfect.

This loſs is however amply ſupplied in another way, as will be evident from the following experiment.

April the 1ſt. 1778, I planted in my garden a piece of the *Butterbur* root, two inches long, the thickneſs of the little finger, with a tuft of leaves to it. November the 3d. 1779, this root with its increaſe, was dug up, many of the ſhoots had extended themſelves to the diſtance of ſix feet, and penetrated two feet in depth; the whole waſhed from the ſurrounding dirt, weighed eight pounds.

A very ingenious Swediſh botaniſt informed me, that the early appearance of this plant, induced the rural oeconomiſt in *Sweden*, to plant it near their bees, who reſort much to its bloſſoms. The above experiment ſhews that this cuſtom ſhould be adopted with caution, ſince where this plant abounds, the ground is ſo ſhaded with its ample leaves, as to produce few others.

The ſoil in which it flouriſhes moſt is a moiſt one, hence it is moſt commonly found on the banks of rivers and ſtreams. Near London it grows on the north ſide of the River Thames, betwixt *Weſtminſter Bridge* and *Chelſea*.

Formerly it was a medicine of great repute in peſtilential and other fevers; but in the modern practice it is but little regarded.

Tussilago Farfara.

TUSSILAGO FARFARA. COLTSFOOT.

TUSSILAGO *Linnæi Gen. Pl.* SYNGENESIA POLYGAMIA SUPERFLUA.

Recept. nudum. *Pappus* ſimplex. *Cal.* ſquamæ æquales, diſcum æquantes, ſubmembranaceæ.

Raii Syn. Gen. 17. HERBÆ FLORE COMPOSITO, SEMINE PAPPOSO NON LACTESCENTES, FLORE DISCOIDE.

TUSSILAGO *Farfara* ſcapo unifloro imbricato, foliis ſubcordatis angulatis denticulatis. *Linnæi Syſt. Vegetab. p.* 629. *Spec. Plant. p.* 1214. *Fl. Suecic. n.* 743.

PETASITES ſcapo unifloro; floſculis in ambitu lingulatis. *Haller hiſt. n.* 143.

TUSSILAGO *Farfara. Scopoli Fl. Carniol. n.* 1059.

TUSSILAGO vulgaris *Bauhin pin.* 197.

TUSSILAGO *Gerard emac.* 811.

TUSSILAGO *Parkinſon* 1220. *Raii Syn. p.* 173, Common Coltsfoot. *Hudſon Fl. Angl. p.* 315. *Oeder Fl. Dan. icon.* 595.

RADIX prælonga, craſſitie minimi digiti, albida, ſub terra reptans et late ſe propagans, ex una parte folia ex altera flores emittens.

FOLIA ſubrotundo-cordata, anguloſo-dentata, inferne tomentoſa, albida, ſuperne viridia ſæpe cum tantillo tomenti.

SCAPI uniflori, ſtriati, tomentoſi, folioſi, foliolis lanceolatis, adpreſſis, rubicundis, peractâ floreſcentiâ nutantes, demum erecti.

CALYX (communis) cylindraceus; ſquamis oblongis, acutis, alternis anguſtioribus, *fig.* 1, 2.

COROLLA compoſita, COROLLULÆ in *diſco* hermaphroditæ, tubuloſæ, flavæ; limbo quinquefido, acuto, reflexo, *fig.* 4; ANTHERÆ in tubum coalitæ, apicibus acutis, *fig.* 5; GERMEN breve, *fig.* 8; STYLUS filiformis, Antheris longior, *fig.* 9; STIGMA capitatum, *fig.* 10.

COROLLULÆ in *radio* femineæ, flavæ, baſi tubuloſæ, limbus linearis, *fig.* 3; GERMEN oblongum, *fig.* 6; STIGMA bifidum, tenue, *fig.* 7.

SEMEN oblongum, pallide fuſcum; PAPPUS ſeſſilis, ſimplex, *fig.* 11.

ROOT very long, the thickneſs of ones little finger, whitiſh, creeping under the ground, and propagating itſelf far and wide; from one part of it ſending forth leaves, from another part flowers.

LEAVES of a roundiſh heart-ſhaped figure, angular and indented, underneath downy and whitiſh; above green, oftentimes covered with a little down.

STALKS ſupporting one flower, channeled, downy, covered with leaves, which are lanceolate, preſſed to the ſtalk and reddiſh, upright, when the bloſſoms are over hanging down, finally becoming upright.

CALYX (common to all the florets) cylindrical; the ſquamæ or little leaves oblong, pointed; the alternate ones narroweſt.

COROLLA compound: the FLORETS in the *center* hermaphrodite, tubular, yellow; the limb divided into five ſegments, which are pointed and turn back, *fig.* 4: ANTHERÆ uniting into a tube, the tips pointed, *fig.* 5: the GERMEN ſhort, *fig.* 8: the STYLE filiform, longer than the Antheræ, *fig.* 9: the STIGMA forming a little head, *fig.* 10.

FLORETS in the *circumference* yellow, at bottom tubular, the limb very narrow, *fig.* 3: GERMEN oblong, *fig.* 6: STIGMA bifid, ſlender, *fig.* 7.

SEED oblong, of a pale brown colour; DOWN ſtanding on the ſeed, not feathered, *fig.* 11.

NEXT to the *Hazel*, the *Coltsfoot* is the firſt flower which appears with us in the Spring; and there is this remarkable circumſtance attending it, that its bloſſoms come up generally at ſome diſtance from, and before its leaves: theſe are gathered by many perſons who make a Syrup or Tea of them when dried, which is generally conſidered as a Pectoral, or uſeful in diſorders of the Lungs. The leaves make a principal ingredient in the Britiſh Herb Tobacco.

As ſoon as the flowers are out of bloom, and the ſeeds with their Pappus or Down, as yet moiſt, are incloſed within the Calyx, the heads hang down as repreſented in the figure: as the moiſture of the ſeeds and pappus evaporates, in ripening, they become lighter, and are again erected; and now the Pappus fully expands, and puts on ſomewhat the appearance of the Dandelion puff. I have noticed this peculiarity, as the like does not take place in the generality of compound flowers.

In *Charlton ſand pits*, and many other places about Town, the *Coltsfoot* is plentiful enough; flowering in February and March.

Farmers are diſpleaſed with the appearance of this plant on their ground, as it not only indicates a poor, cold, and impoveriſhed ſoil; but is with much difficulty, from the length of its creeping roots, effectually deſtroyed.

The

The cuſtom of ſmoaking this plant, which ſtill prevails, is of antient date: PLINY directs the dried leaves and root of *Coltsfoot* to be burned, and the ſmoak drawn into the mouth through a reed and ſwallowed, as a remedy for an obſtinate cough; the patient ſipping ſome raiſin wine with each draught of the ſmoak: "*Hujus aridæ cum radice* "*fumus, per Arundinem hauſtus et devoratus, veterem ſanare dicitur tuſſim; ſed in ſingulos hauſtus paſſum guſtandum eſt.*" This is the only account amongſt the antients, that we have hitherto been able to diſcover, which tends towards the practice of ſmoaking: but we cannot acquieſce in the common opinion, that ſmoaking of Tobacco, or at leaſt ſome kind of plant, was unknown in the old word 'till SIR WALTER RALEIGH brought it from *America*. Is it probable that the inhabitants of *Africa* ſhould ſo ſoon have univerſally adopted a cuſtom from *Europe* that was unknown two centuries ago? Or that the *Aſiatics*, ſo tenacious of their own manners, cuſtoms and habits, ſhould in ſo ſmall a time, have agreed to extend this uncouth kind of luxury over a vaſt continent, from the confines of *Conſtantinople* to the extremities of *China?*

Countries thinly inhabited are much moleſted with Gnats. Travellers tell us, that the *Northern Aſiatic Tartars* conſtantly carry on their arms, during the Summer, a pot of burning Touchwood, ſometimes prepared from the root of this plant, to defend themſelves by the ſmoak, from the annoyance of theſe inſects. It is probable one more ingenious than the reſt contrived to keep this fire alive, by a communication with his breath; and this expedient by degrees produced a Tobacco-pipe. A propenſity to intoxication, ſo natural to mankind, would give a preference to Tobacco before moſt other vegetable ſubſtances; and thus a cuſtom that in the beginning was taken up for ſelf-defence, at laſt might become a luxury.

The firſt diſcoverers of *America* probably found the natives ſmoaking Tobacco: but might they not bring this practice with them from the northern parts of *Europe* or *Aſia*, which were never penetrated by the Roman arms; from whence it appears probable that *America* was peopled?

A room or bed-chamber may at any time be cleared from Gnats, by ſetting the windows open, and ſmoaking or burning ſome Tobacco, from which the inſects are obliged immediately to eſcape. Thoſe that are offended by its ſmell, may ſubſtitute this plant in its ſtead. But cultivated and inhabited countries are in a great meaſure defended from inſupportable ſwarms of Gnats by a proviſion of nature little attended to. Of the four kinds of Swallows which frequent this iſland, whoſe food conſiſts intirely of flying inſects, three of them are domeſtic, and could with difficulty find ſuitable conveniencies for building their neſts, without attaching themſelves to the habitations of men, around which they are perpetually hawking for their prey: hence it is apparent why deſerts particularly abound with Gnats.

The Poet obſerves that the Martin or Martlet, one ſpecies of ſwallow, chooſes a delicate air for its reſidence. Who then can ſuffer its neſt to be diſturbed after reading the following lines? eſpecially ſince this bird pays ſuch a compliment to the ſweetneſs of the ſituation?

——————"*This gueſt of ſummer,*
"*The temple-haunting Martlet, does approve,*
"*By his lov'd manſionry, that heavens breath*
"*Smells wooingly here: no jutting frieze,*
"*Buttreſs, nor coigne of vantage, but this bird*
"*Hath made his pendent bed and procreant cradle.*
"*Where they moſt breed and haunt, I have obſerv'd*
"*The air is delicate.*"

Although we have wandered from our ſubject, the candid and humane will forgive our interceding for a viſitor, who claiming the rites of hoſpitality, places unreſerved confidence in us, and ſeems directed by providence to attend on mankind for purpoſes the moſt friendly and beneficial.

N°108

Viola canina

VIOLA CANINA. DOGS VIOLET.

VIOLA *Linnæi Gen. Pl.* SYNGENESIA MONOGAMIA.

Calyx pentaphyllus. *Corolla* pentapetala, irregularis, poſtice cornuta. *Capſula* ſupera, trivalvis, unilocularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

VIOLA *canina*, caule adultiore adſcendente, foliis oblongo-cordatis. *Linnæi Syſt. Vegetab. p.* 668.

VIOLA caule procumbente, ramoſo, foliis petiolatis cordatis. *Haller hiſt. helv. n.* 563.

VIOLA *canina*. *Scopoli Fl. Carniol. n.* 1098.

VIOLA martia inodora ſylveſtris. *Bauhin. pin. p.* 364.

VIOLA *canina* ſylveſtris. *Ger. emac.* 851.

VIOLA ſylveſtris. *Parkinſon* 755. *Raii Syn. p.* 364, Wild or Dogs Violet. Viola canina minor, *Raii Syn.* 364. *t.* 24. *fig.* 1. *Hudſon Fl. Angl. p.* 331.

RADIX perennis, craſſitie pennæ coracis, obliqua, fibras longiuſculas, tenaces dimittens, ſuperne ſubdentatus ex reliquiis petiolorum.

ROOT perennial, about the thickneſs of a crow quill, oblique, ſending down ſome longiſh fibres of a toughiſh ſubſtance, on the upper part ſomewhat toothed or knobbed, from the remains of the leaf ſtalks.

CAULIS ſuberectus, triuncialis, ſubanguloſus, *lævis, folia floreſque ferens.*

STALK nearly upright, about three inches high, ſomewhat angular, *ſmooth, bearing both leaves and flowers.*

FOLIA cordata, lævia, crenata, ſubtus ſæpe purpuraſcentia, ſuperiora oblongo-cordata.

LEAVES heart-ſhaped, ſmooth, crenated, and oftentimes purpliſh underneath; the upper leaves of a longer ſhape.

STIPULÆ caulinæ lanceolatæ, pilis rigidiuſculis ciliatæ.

STIPULÆ of the ſtalk lanceolate, and edged with ſtiffiſh hairs.

PEDUNCULUS tetragonus, bractæis duabus ſetaceis inſtructus.

FLOWER-STALK ſquare, furniſhed with two narrow pointed floral-leaves.

FLOS purpureus, inodorus, majuſculus.

FLOWERS purple, ſcentleſs, and rather large.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, acuminatis, nervoſis, baſi dentatis; tribus ſuperioribus ſuperne tuberculoſis, apicibus recurvatis, duobus inferioribus longioribus, *fig.* 1.

CALYX: a PERIANTHIUM of five leaves, which are lanceolate, pointed, rib'd, and indented at the baſe; the three uppermoſt a little uneven on their upper ſurface, the points bending upward; the two lowermoſt longer, *fig.* 1.

COROLLA, ut ut Stamina cum Piſtillo, a duabus ſpecibus jam deſcriptis (vid. odorata et hirta) vix diſcrepant, petala lateralia baſi barbata ſunt, *fig.* 2, petalumque inferius ad baſin lineis ſaturate purpureis pingitur.

COROLLA, as well as the Stamina and Piſtillum, differ very little from the two ſpecies already deſcribed, (viz. the ſweet-ſcented and hairy) having the lateral petals, bearded at the baſe, *fig.* 2; and the baſe of the lowermoſt petal, painted with deep purple lines.

CAPSULA oblonga, trigona, trivalvis, valvulis cymbiformibus, *fig.* 3.

CAPSULE oblong, three cornered, having three valves, which are boat-ſhaped, *fig.* 3.

SEMINA plurima, glabra, pallida, flaveſcentia, in ſingulâ valvulâ, 7, 9, *fig.* 4.

SEEDS numerous, ſmooth, of a pale yellowiſh colour, in each valve 7 or 9, *fig.* 4.

THE *Dog Violet* differs from the *Sweet Violet* in many particulars; the chief of which are,

Firſt, The flowers have no ſmell.

Second, The flowers grow on foot-ſtalks which ſpring from the ſtalk, and not the root, and are in general of a larger ſize.

Third, The ſtipulæ, next the root and on the ſtalk, are very ſtrongly edged with ſtiff hairs.

Fourth, The ſegments, or leaves of the calyx, are pointed.

Fifth, The ſeed-veſſel is oblong and three corner'd.

It differs from the *hairy Violet* alſo, in all theſe reſpects except the firſt.

The ſame peculiar circumſtance of producing ſeed during the ſummer months, without any expanded corolla, takes place alſo in this ſpecies.

It grows with us in greater abundance than either the *Viola odorata* or *hirta*, in our woods, and under hedges; and begins to flower in April, when both the others are going out of bloom.

It varies in colour, being ſometimes found with white bloſſoms; in ſize alſo, according to the expoſed or ſheltered ſituation in which it grows, it differs very much: and there is little doubt, but the *Violet* repreſented in RAY's *Synopſis*, *pl.* 24, *fig.* 1, is the *Viola Canina* in its ſmall ſtate, though the figure be imperfect as to its characters.

HALLER obſerves, that thoſe who collect Violet bloſſoms for making the ſyrup, are apt to ſubſtitute this ſpecies: but this cannot often happen: ſhould theſe flowers alone be expoſed for ſale, they may be detected by their want of ſmell; ſhould they be mixed with a few of the ſweet ones, they may be diſcovered by the pointed ſhape of the leaves of the calyx.

Orchis masculaf

ORCHIS MASCULA. EARLY SPOTTED ORCHIS.

ORCHIS *Linnæi Gen. Pl.* GYNANDRIA DIANDRIA.
Nectarium corniforme pone florem.
Raii Syn. Gen. 26. HERBÆ RADICE BULBOSA PRÆDITÆ.
ORCHIS *maſcula* bulbis indiviſis, nectarii labio quadrilobo crenulato: cornu obtuſo petalis dorſalibus reflexis. *Lin. Syſt. Vegetab. p.* 674. *Fl. Suecic. p.* 319. *n.* 795.
ORCHIS radicibus ſubrotundis; petalis lateralibus reflexis; labello triſido; ſegmento medio longiori, bifido. *Haller hiſt. n.* 1283. *tab.* 33.
ORCHIS *maſcula. Scopoli Fl. Carniol. n.* 1111.
ORCHIS morio mas foliis maculatis. *Bauhin. pin.* 81. *Parkinſon.* 1346.
CYNOSORCHIS morio mas. *Gerard. emac.* 208. *Raii Syn. p.* 376. *n.* 3, The Male Fool-ſtones. *Hudſon. Fl. Angl. p.* 333. *Oeder. Fl. Dan. t.* 457. *Lightfoot. Fl. Scot. p.* 515.

RADIX Bulbi duo ſubrotundi, majuſculi.

CAULIS pedalis, erectus, teres, ſolidus, ſuperne purpuraſcens, nudus, inferne foliis vaginantibus veſtitus.

FOLIA latiuſcula, maculis atropurpureis plerumque inſignita, inferne carinata.

SPICA longa, ſpecioſa, laxa.

BRACTEÆ purpureæ, lanceolatæ, ſubmembranaceæ, germine paulo breviores, apicibus paululum contortis.

COROLLA: PETALA quinque purpurea; duo ovato-acuta, *erecta*, carinata, apicibus incurvatis, tria conniventia in galeam: LABELLUM amplum, trilobum, medio productiore, omnibus acute crenulatis, et baſi maculatis: FAUX alba.

EXPLIC. FIG.

Fig. — 1, Bracteæa.
2, 3, Petala.
4, Labellum.
5, Nectarium, nat. magnit.
6, Glandula ad baſin Filamenti.
7, Filamentum.
8, Anthera.
9, Receptaculum glandularum Filamentorum.
10, Theca Antherarum clauſa.
11, Eadem aperta.
12, Anthera extenſa.
13, Stigma.
14, Germen, auct.

ROOT: two Bulbs of a roundiſh form, and ſomewhat large.

STALK a foot high, upright, round, ſolid, above naked and purpliſh, below cloathed with ſurrounding leaves.

LEAVES broadiſh, moſt commonly marked with dark purple ſpots, the midrib projecting ſharply on the under ſide.

SPIKE long, ſhowy, looſe.

FLORAR-LEAVES purple, lanceolate, ſomewhat membranous, a little ſhorter than the Germen, the tips a little twiſted.

COROLLA: five purple PETALS, two of which are of an oval pointed ſhape, *upright*, with a projecting rib, the tips bending inward; the remaining three form the galea or helmet: the LIP large, with three lobes, of which the middle one is the longeſt, all of them ſharply notched, and ſpotted at the baſe: MOUTH white.

EXPLANATION of the FIGURES.

Fig. — 1, The Floral-leaf.
2, 3, The Petals.
4, The Lip.
5, The Nectary of their natural ſize.
6, The Gland at the baſe of the Filament.
7, The Filament.
8, The Anthera.
9, The Cavity containing the Glands of the Filaments.
10, The caſe containing the Antheræ cloſed.
11, The ſame opened.
12, The Anthera ſtretched out.
13, The Stigma.
14, The Germen, magnified.

STUDENTS in general, find a difficulty in obtaining a clear idea of the parts of fructification in the *Orchis* tribe. There is a peculiarity of ſtructure runs through the whole of them, very different from what we meet with in plants in general.

The greater part of this genus have bulbous roots, which are yearly renewed; ſome have fibrous roots, which alſo partake of the ſame nature. As a proof of their being yearly renewed, we always find, when there are two bulbs, that one of them is in a more withered ſtate than the other; and if we take the roots up in Autumn, we find one bulb only.

Theſe plants multiply themſelves very little. The ſmall increaſe they make, appears to be from off-ſets. Hitherto we have no ſatisfactory proof of their being propagated from ſeed; yet the ſeed-veſſels in many of them, are large, well formed, and filled with ſeeds; which though extremely minute, appear perfect.

The ſmallneſs of the ſeed is, however, no argument againſt its vegetating: ſome of the *Ferns*, whoſe ſeeds are much ſmaller, are well known to ſome ingenious nurſerymen near *London, to be propagated from ſeed, and to come up ſpontaneouſly in their hot-houſes, where the original plant has ſcattered its ſeed: and it is moſt probably owing to a want of minute attention, that the progreſs of the *Orchis* ſeedlings has not yet been obſerved.

Were we however diſpoſed to doubt the vegetative power of theſe ſeeds, we might urge, that their barrenneſs was owing to their not being properly impregnated; the Antheræ in the *Orchis* tribe, appearing to be totally different in their ſtructure, from thoſe of plants in general; and not containing, ſo far at leaſt, as I have yet been able to diſcover, any ſimilar pollen, or impregnating duſt.

Each flower has two ſtamina, whoſe ſtructure is well deſerving the attention of the curious: each of theſe ſtamina is contained within a bag or caſe, the edges of which fold over each other, and open anteriorly, as the plant advances toward maturity, *fig.* 10, 11. At this period, in many of the *Orchis* tribe, they hang down out of their caſes towards the ſtigma, and are particularly viſible in the *Bee Orchis*, and ſome others: on the ſlighteſt pull they are drawn out, and then at the baſe of each filament, we diſcover a ſmall tranſparent globule, *fig.* 6; and at the top a club-ſhaped ſubſtance, moſt commonly of a yellow colour, and granulated ſurface, which muſt be conſidered as the *Anthera*, *fig.* 8. On ſtretching this ſubſtance before the view of a microſcope, it appears to be compoſed of a number of cubic or irregularly ſquare corpuſcles, united together by fine elaſtic threads, *fig.* 12: that theſe corpuſcles produce the effect of *Pollen* ſeems highly probable, though in a manner, at preſent unknown to us.

There is no difficulty in diſtinguiſhing this ſpecies from all our other *Orchis's*: its ſpotted leaves and early bloom, will in general be ſufficient.

The beauty of its leaves and flowers, juſtly intitle it to a place in the gardens of the curious; and in which, if planted in a ſhady ſituation, it will readily grow.

It flowers in April and May.

About London it is become ſomewhat ſcarce; but in the woods and meadows in moſt parts of England, no plant more abounds.

Should it ever be found practicable, as well as profitable, to cultivate this genus of plants, for the purpoſe of making *Salap*, this ſpecies appears as likely to anſwer as any of them.

The extraordinary invigorating powers of the roots of theſe plants, have been handed down to us with ceremony, by many great names amongſt antiquity: but we readily ſubſcribe to the opinion of Monſieur GARIDEL, who in ſpeaking of the *Orchis*, ſays that great names have introduced many abſurd medicines.

*Meſſrs. LEE and GORDON.

ARUM MACULATUM. CUCKOW-PINT.

ARUM *Linnæi Gen. Pl.* GYNANDRIA POLYANDRIA.

Spatha monophylla, cucullata, *Spadix* ſupra nudus, inferne femineus, medio ſtamineus.

Raii Syn. Ger. 16. HERBÆ BACCIFERÆ.

ARUM *maculatum* acaule, foliis haſtatis integerrimis, ſpadice clavato. *Lin. Syſt. Vegetab. p.* 690.

ARUM foliis ſagittatis; ſpatha recta: clava cylindrica. *Haller. hiſt. helv. n.* 1302.

ARUM *maculatum*. *Scopoli Fl. Carniol. n.* 1138.

ARUM vulgare maculatum. *Bauhin pin.* 195.

ARUM vulgare. *Gerard. emac.* 834.

ARUM maculatum et non maculatum. *Park.* 373. *Raii Syn. p.* 266, Wake-Robin, Cuckow-pint.

Hudſon. Fl. Angl. p. 342.

Lightfoot Fl. Scot. p. 528.

RADIX perennis, tuberoſa, albida, magnitudine nucis myriſticæ majoris, tranſverſa, fibras plurimas, ſimplices undique in terram demittente, ſapore acerrimo, tuberculis e lateribus egerminantibus ſe propagante.

FOLIA: ex una radice duo tria vel quatuor, rarius plura exeunt, ſagittata, petiolata, nitida, venoſa, venis intra marginem terminatis, maculis purpureis ſæpe notata.

PETIOLI baſi vaginantes, ſubtriquetri, externe convexi, interne canaliculati.

FRUCTIFICATIO ſpathâ incluſa.

CALYX: Spatha monophylla, maxima, oblonga, baſi convoluta, apice connivens, ventre compreſſa; *Spadix* clavatus, ſimpliciſſimus, ſpathâ paulo brevior, purpureus aut albidus, inferne germinibus obvallatus, marceſcens ſupra germina, *fig.* 4.

COROLLA nulla.

STAMINA: FILAMENTA nulla: ANTHERÆ plurimæ, ſeſſiles, tetragonæ, purpureæ, ſpadici adnatæ, *fig.* 1.

NECTARIA corpuſcula plurima, baſi craſſa, deſinentia in cirrhos filiformes ſupra et infra ſtamina, *fig.* 3.

PISTILLUM: GERMINA plurima, baſin ſpadicis veſtientia, infra ſtamina collocata, obovata: STYLI nulli: STIGMATA villis barbata, *fig.* 2.

PERICARPIUM: BACCÆ totidem, coccineæ, globoſæ, uniloculares, *fig.* 5.

SEMINA plurima, ſubrotunda.

ROOT perennial, tuberous, whitiſh, about the ſize of a large nutmeg, growing tranſverſely, ſending forth on every ſide a great number of ſingle fibres, of a moſt biting taſte, propagating itſelf by little tubercles, ſpringing from its ſide.

LEAVES: from one root two three or four, ſeldom more proceed, arrow-ſhaped, ſtanding on foot-ſtalks, ſhining, veiny, the veins terminating within the margin, often marked with purple ſpots.

LEAF-STALKS at bottom forming a ſheath, three-cornered, externally convex, internally channelled.

FRUCTIFICATION incloſed in a ſheath.

CALYX: a *ſheath* of one leaf, very large, oblong, the edges wrapping over each other at bottom, at top cloſing, the middle part compreſſed, the tongue club-ſhaped, ſingle, ſhorter than the ſheath, purple or of a whitiſh colour, below ſurrounded by the germina, and withering above them.

COROLLA wanting.

STAMINA: FILAMENTS wanting: ANTHERÆ numerous, ſeſſile, four cornered, purple, grow to the tongue, *fig.* 1.

NECTARIES ſeveral roundiſh bodies, terminated by a tapering thread, placed above and beneath the ſtamina, *fig.* 3.

PISTILLUM: GERMINA numerous, ſurrounding the baſe of the ſpadix or tongue, of an oval ſhape, placed beneath the ſtamina: STYLES wanting: STIGMATA bearded with little hairs, *fig.* 2.

BERRIES correſponding in number with the germina, ſcarlet, round, of one cavity, *fig.* 5.

SEED numerous and roundiſh.

BOTANISTS who have noticed the hiſtory of this plant, well know that it appears under two very different forms in the ſpring and autumn: but the generality of people are not aware, that the naked cluſter of ſcarlet berries, ſo conſpicuous in the hedges at the cloſe of the ſummer, is the produce of what are uſually called *Lords and Ladies*, which attract the notice of children in the ſpring, and which are obſervable under moſt ſhady hedges.

The leaves of the *Cuckow-pint* are ſubject to vary very much in their ſhape, and often appear ſpotted with purple, as ſometimes does the ſheath: the tongue within the ſheath varies alſo much in its colour, from a yellowiſh green to a fine purple.

All authors agree, that the root of the *Arum*, in its recent ſtate, is extremely acrimonious; but they in general agree, that it loſes its biting quality when dried, and with it its medicinal powers.

MILLER obſerves, that theſe roots are generally gathered in the ſpring, when the leaves are in full vigour, ſo that the roots ſhrink, and ſoon loſe their pungent quality; but thoſe which are taken up when the leaves decay, will continue good a whole year, and retain their pungency the ſame as when firſt taken up; *Gard. Dict. 4to. ed.* 5. The ſame mode is recommended by BERGIUS, in his *Mat. Medic.*

When dried and powdered, they become eatable, and afford nouriſhment ſomewhat ſimilar to ſago or ſalep.

The diſtilled water of the root, as alſo a powder prepared by drying its juice, have been in uſe as coſmetics. The root alſo, like that of the Sopewort, has been occaſionally ſubſtituted for ſope; *Ray*, *Rutty*.

Many of the *Arums* have mild roots, which are eaten by the inhabitants of all the hot countries, where they grow naturally: and ſome of the ſorts are cultivated by the inhabitants of the ſugar colonies as eſculent plants; the leaves of one of the ſpecies of them, called *Indian Kale*, are boiled, and ſupply the want of other greens; *Miller's Gard. Dict.*

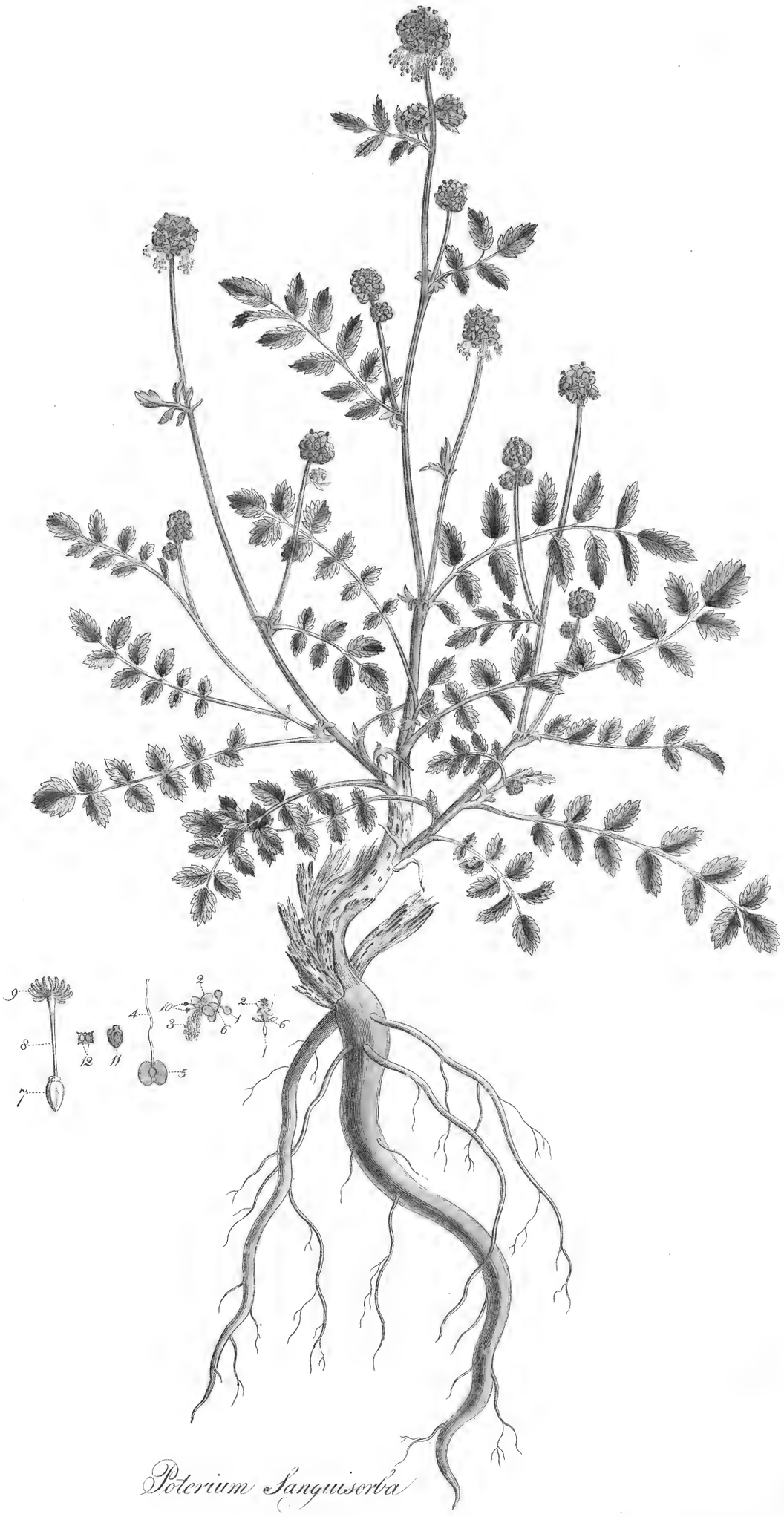
The berries are equally acrimonious with the roots; *Scopoli.*

When ſtimulating medicines are proper, which at the ſame time increaſe the ſecretions, as in ſome ſpecies of aſthma and dropſy, the *Arum* may probably be found ſerviceable: at preſent however it is not much in uſe.

If my memory does not deceive me, the roots in the woods are eaten by divers Birds, notwithſtanding their pungency, particularly the Pheaſant.

Arum maculatum

Sansom Sculp.



Poterium Sanguisorba

POTERIUM SANGUISORBA. BURNET.

POTERIUM *Linnæi Gen. Pl.* MONOECIA POLYANDRIA.

Raii Syn. Gen. 10. HERBÆ FLORE PERFECTO SIMPLICI, SEMINIBUS NUDIS SOLITARIIS SEU AD SINGULOS FLORES SINGULIS.

POTERIUM *Sanguiſorba* inerme caulibus ſubanguloſis. *Lin. Sp. Pl.* 1411.

PIMPINELLA polyſtemon. *Haller hiſt. n.* 706.

SANGUISORBA minor. *J. Bauhin III.* 2. 113.

PIMPINELLA Sanguiſorba minor hirſuta. *Bauhin pin.* 160.

PIMPINELLA vulgaris minor. *Parkinſon* 582.

PIMPINELLA ſylveſtris. *Gerard emac.* 1045. *Raii Syn. p.* 203, Burnet. *Hudſon. Fl. Angl. p.* 358.

RADIX perennis, ſimplex, albida, in terram alte deſcendens.

CAULES plures, ſuberecti, dodrantales aut pedales, ramoſi, ſtriati, ſubanguloſi, rubicundi, læves, ad baſin hirſutuli.

FOLIA alterna, pinnata, pinnis inferioribus ſubrotundis, plerumque oppoſitis, ſerratis, lævibus, ſubtus cœruleſcentibus, nervo medio hirſutulo, caulinis ovatis et ovato-acutis.

STIPULÆ dentatæ.

FLORES in capitulis ſubrotundis congeſti, ſuperiores feminei, inferiores maſculi, ſæpe etiam hermaphroditi.

CALYX: PERIANTHIUM triphyllum, inferum, foliolis membranaceis, marceſcentibus, *fig.* 1.

COROLLA quadripartita, laciniis ovatis, ſæpe coloratis, concavis, patentibus, baſi coalitis, *fig.* 2: in flore maſculo ſeu hermaphrodito et calyx et corolla majores ſunt.

STAMINA: FILAMENTA circiter triginta, longa, pendula, rubra: ANTHERÆ flavæ, biloculares, loculis ſemilunatis, *fig.* 3, 4, 5.

PISTILLUM in flore femineo: GERMEN quadrangulum: STYLUS capillaris: STIGMA ruberrimum, penicilliforme, *fig.* 7, 8, 9, auct. Styli et Stigmata duo ſæpe occurrunt: in flore hermaphrodito Styli duo breviores, Stigmatibus minus expanſis, *fig.* 10.

PERICARPIUM BACCA exſucca, tetragona, lateribus rugoſis, continens Semina duo, pallide fuſca, *fig.* 11, 12.

ROOT perennial, ſimple, whitiſh, penetrating deep into the earth.

STALKS ſeveral, nearly upright, from nine inches to a foot in height, branched, ſtriated, ſomewhat angular, of a reddiſh colour, ſmooth, but ſlightly hairy at bottom.

LEAVES alternate and pinnated; the lowermoſt pinnæ, or ſmall leaves, roundiſh, generally oppoſite, ſerrated, ſmooth, underneath blueiſh; the midrib ſlightly hairy; the leaves of the ſtalk oval and pointed oval.

STIPULÆ indented.

FLOWERS growing in little round heads, the uppermoſt female, the lowermoſt male, and oftentimes hermaphrodite.

CALYX: a PERIANTHIUM of three leaves, placed below the Germen; the leaves membranous and withering, *fig.* 1.

COROLLA divided into four ſegments, which are oval, often coloured, concave, ſpreading, and uniting at bottom, *fig.* 2: in the male or hermaphrodite flower both the Calyx and Corrolla are larger.

STAMINA: FILAMENTS about thirty, long, pendulous, and of a red colour: ANTHERÆ yellow, bilocular, the cavities ſemilunar, *fig.* 3, 4, 5.

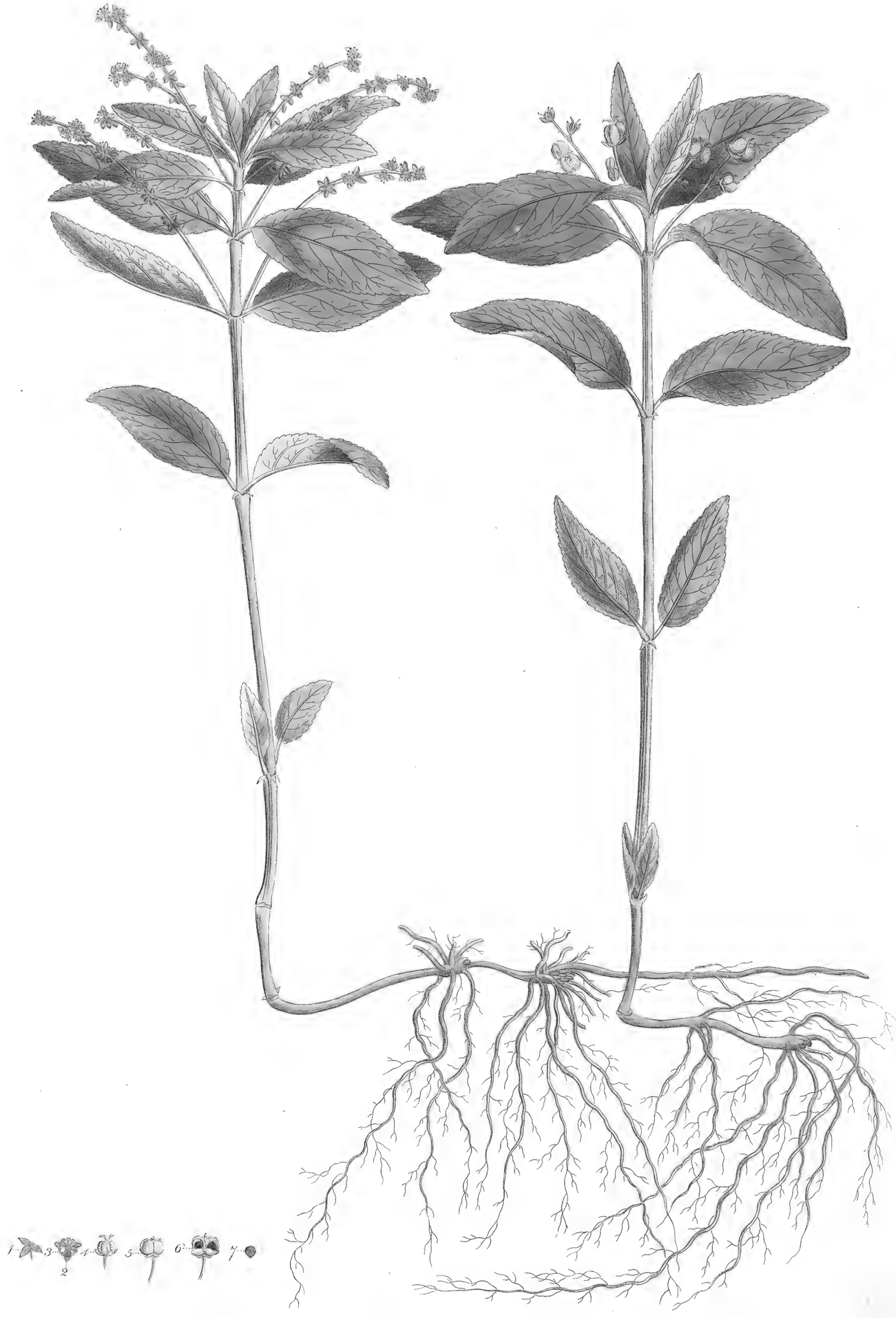
PISTILLUM in the female flower: GERMEN quadrangular: STYLE capillary: STIGMA very red, and pencil-ſhaped, *fig.* 7, 8, 9, magnified. Two Styles and Stigmata often occur: in the hermaphrodite flower the Styles are ſhorter, and the Stigmata leſs expanded, *fig.* 10.

SEED-VESSEL a juiceleſs BERRY, having four wrinkled ſides, and containing two pale brown SEEDS, *fig.* 11, 12.

BURNET is one of thoſe plants which has for ſome years paſt been attempted to be introduced into agriculture, but not anſwering the farmers expectations, is now in a great degree laid aſide. Cattle are ſaid not to be fond of it; nor is its produce ſufficient to anſwer the expence attending its culture. It is to be lamented that perſons do not pay a little more attention to the nature of plants before they ſo warmly recommend them. It ſhould ſeem very unlikely *a priori*, that a ſmall plant, ſcarce ever met with but on hilly and chalky ground, and to which cattle in ſuch ſituations do not ſhew any particular attachment, ſhould afford better, or more copious nouriſhment, than the *Clovers* and other plants already in uſe. It is not meant by this, however, to diſcourage that laudable ſpirit of improvement which ſo happily prevails at preſent; but to caution ſuch as introduce any new plant, to make themſelves thoroughly acquainted with its natural hiſtory.

The leaves of this plant, when bruiſed, ſmell ſomewhat like Cucumber; and are uſed by ſome as a ſallad; and by others added to cool tankard to give it an agreeable flavour.

LINNÆUS places it among his Monoicous plants, the flowers on the top of the heads being female, and thoſe at the bottom male, contrary to what occurs in moſt plants of that Claſs: but it happens very frequently, that the bottom flowers have likewiſe in them two Piſtils, although not ſo conſpicuous as in the female flowers, the Stigmata being not ſo much branched; hence there being female and hermaphrodite flowers on the ſame plant, it would perhaps with more propriety be placed in the Claſs *Polygamia.* Do not theſe obſcure hermaphrodite flowers contribute to the fertility of the plant?



Mercurialis perennis

MERCURIALIS PERENNIS. DOGS MERCURY.

MERCURIALIS *Linnæi Gen. Pl.* DIOECIA ENNEANDRIA.

MASC. *Cal.* 3-partitus. *Cor.* 0. *Stam.* 9-8. 12. *Antheræ* globosæ, didymæ.

FEM. *Cal.* 3-partitus. *Cor.* 0. *Styli* 2. *Caps* dicocca, 2-locularis. 1-sperma.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALA POTIUS.

MERCURIALIS *perennis* caule simplicissimo foliis scabris. *Linnæi Syst. Vegetab. Sp. Pl.* 1465.

MERCURIALIS caule perenni simplici, foliis ovato-lanceolatis hirsutis. *Haller hist. helv. n.* 1601.

MERCURIALIS *Cynocrambe. Scopoli Fl. Carniol. p.* 266. *n.* 1225.

MERCURIALIS *perennis* repens Cynocrambe dicta, *Raii Syn. p.* 139. *Hudson Fl. Angl. p.* 371.

MERCURIALIS montana testiculata et Mercurialis montana spicata. *Bauhin. pin.* 123.

MERCURIALIS sylvestris Cynocrambe dicta vulgaris mas et femina. *Parkinson* 295.

CYNOCRAMBE mas et femina. *Gerard emac.* 333. *Oeder Fl. Dan.* 400.

RADIX perennis, repens, alba, fibrosissima.
CAULIS erectus, simplex, pedalis, folioſus, inferne nudus, teres, alterne anceps.
FOLIA opposita, ovato-acuta, petiolata, hirsutie scabriuscula, serrata, serraturis obtusiuscul is, glandulâ albâ ad lentem conspicua terminatis.

STIPULÆ duæ, parvæ, acutæ, caulis utrinque ad basin petioli.
PEDUNCULI versus summitatem caulis prodeunt, oppositi, axillares, hirsuti, in maribus caulem superant in feminis intra folia reconduntur.

FLORES feminei pauci, masculi plures, sessiles, glomeratim et verticillatim quasi caulem semiamplectuntur.

FEMINA.

CALYX: PERIANTHIUM tripartitum, laciniis ovato-lanceolatis, suberectis, *fig.* 1, 2.

COROLLA nulla.
NECTARIA acumina duo subulata ad singulum latus germinis singula.
PISTILLUM: GERMEN subrotundum, compressum: STYLI seu potius STIGMATA dua, acuta, reflexa, *fig.* 4.
PERICARPIUM: CAPSULA subrotunda, didyma, bilocularis, *fig.* 5, 6.
SEMEN solitarium, subrotundum, purpureo-fuscum, *fig.* 7.

MAS.

CALYX: PERIANTHIUM ut in femina.
STAMINA: FILAMENTA novem plerumque, capillaria, recta, longitudine calycis: ANTHERÆ globosæ, didymæ, primo flavæ, mox cœrulescentes, *fig.* 3.

ROOT perennial, creeping, white, and very fibrous.
STALK upright, simple, a foot high, leafy, naked below, round, slightly winged alternately.
LEAVES opposite, oval, pointed, standing on foot-stalks slightly hairy and rough to the touch, serrated; the teeth bluntish, and terminated by a whitish gland, visible only by a magnifier.
STIPULÆ two, small, pointed, on each side the stalk at the base of the foot-stalk.
FOOT-STALKS of the flowers proceed from the bosoms of the leaves near the top of the stalk, are opposite and hairy; in the male plant they are longer than the stalk; in the female they are hid among the leaves.
FLOWERS in the female few; in the male numerous, sessile, growing somewhat whirl-like in little clusters, and half surrounding the stalk.

FEMALE.

CALYX: a PERIANTHIUM divided into three segments, which are oval, pointed, and somewhat erect, *fig.* 1, 2.
COROLLA wanting.
NECTARY two small pointed filaments, one on each side the germen.
PISTILLUM: GERMEN roundish and somewhat flattened: STYLES, or rather STIGMATA, two, pointed and turning back, *fig.* 4.
SEED-VESSEL: a roundish double CAPSULE of two cavities, *fig.* 5, 6.
SEED: one in each cavity, roundish, of a browniſh purple colour, *fig.* 7.

MALE.

CALYX: a PERIANTHIUM the same as the female.
STAMINA: nine FILAMENTS, for the most part, capillary, strait, the length of the calyx: ANTHERÆ round, double, first yellow, afterwards becoming bluish.

IN the third edition of RAYS *Synopsis*, SIR HANS SLOANE communicates a very particular account of the pernicious effects of this plant. It was, as it appears from thence, gathered by the mistress of a family, in the fields, *(in agris* are the words,) fried with bacon, and eaten for supper by the wife, the husband, and three children; the children in about two hours awaked out of their sleep violently sick; on being removed to the fire they both vomited, and purged, and in about half an hour afterwards they again fell a sleep: two of them continued in this state of stupor for twenty-four hours, when they awaked, and after more copious evacuations recovered. The third child awaked not till the third day, and then just opening its eyes, was seized and carried off by convulsions. The man being of a robust constitution was not so violently affected; but after a longer sleep than usual, went about his business, feeling no other inconvenience than a burning heat in his chin, to assuage which he was obliged for the whole day to apply cold water. The woman, after being more than usually oppressed with sleep, found her self ill, and did not recover for several days.

From

From ſo circumſtantial an account, it would appear that there was little doubt of the noxious quality of this plant to the human ſpecies; yet it is remarkable, that this ſhould be the only inſtance of ſuch effects mentioned by authors, when the plant has by many been recommended as a pot herb: ſuch violent effects do not appear to have been known to the antients, by ſome of whom it is recommended as a laxative medicine.

It appears to be well worth aſcertaining whether it really poſſeſſes thoſe poiſonous qualities; whether it be noxious early in the ſpring, or later in the ſummer; and whether it looſes them in boiling.

LINNÆUS, in his *Flora Suecica*, mentions it as being hurtful to Sheep. Theſe uſeful animals are ſometimes found to all appearance poiſoned by eating ſome particular plant, which the farmer would do well to diſcover.

As many poiſonous plants, under proper management, prove highly beneficial to mankind, ſo it is not improbable but this plant alſo might make ample amends.

It has been obſerved by many, that thoſe plants which change blue in drying, will generally dye blue: this is remarkably the caſe with this plant, nearly as much ſo as with the *Polygonum Tinctorium*, ſent to England from China by the late ingenious and indefatigable Mr. BLAKE, whoſe untimely death every ſincere friend to this country muſt deplore: and was it to undergo a proper management, it is probable that it would produce an Indigo ſomewhat ſimilar.

The *Dogs Mercury* grows plentifully in moſt woods and under hedges, flowering from the end of March to the middle of May. It has a ſtrong creeping perennial root like *Couch-graſs*, whereby it may be readily diſtinguiſhed from the *annual French Mercury*.

The antients have taken notice that this plant was of two ſexes; but they miſtook the female for the male. The cultivation of the Date-bearing Palm furniſhed the *Egyptians* with the firſt obſervations on the ſexes of plants. The fruit of the female was of the utmoſt importance, as it ſupplied many of them with the principal part of their food. The inhabitants of countries where Palms grew naturally, might eat the fruit regardleſs of their manner of fructification; but when other countries, that were deſtitute of this ample proviſion of nature, attempted to tranſplant and cultivate Palms, they muſt neceſſarily have been obliged to attend to the two kinds, the male and the female, as the firſt bore no fruit, and the latter would prove barren if it was removed too far from the male.

It does not appear that the *Jews* were acquainted with the ſexes of Palms, although they are often mentioned in the Bible as growing in *Judea:* but it was well known to THEOPHRASTUS, who deſcribes the method of impregnating the female bloom with the farina of the male, in the ſame manner as modern travellers have ſeen it performed.* But although it is now two thouſand years ſince this author wrote, yet no progreſs was made in demonſtrating the ſexual ſyſtem of plants until this preſent century; before which time, all the writers on botany, inſtead of aſcertaining what plants were of different ſexes, mention male and female oaks, and other kinds of trees, that have both male and female bloom, on the ſame plants.

The utility of this kind of knowledge appears in the management of the Date-bearing Palm: for want of attending to it, the cultivators of hemp frequently meet with conſiderable diſappointments: and it is probable that the planters of hops, by their cuſtom of deſtroying the male plants, may alſo be ſufferers.

We do not remember that any of the early poets have mentioned the different ſexes or mutual love of trees. CLAUDIAN, who was well acquainted with *Egypt*, has very happily introduced it in his deſcription of the beautiful retreat of *Venus* in the *Iſland* of *Cyprus*.

" *Vivunt in Venerem frondes, omniſque viciſſim*
" *Fœlix arbor amat, nutant ad mutua palmæ*
" *Fœdera, populeo ſuſpirat populus ictu*
" *Et platana platanis, alno aſſibilat alnus.*"

" *Branches on branches twin'd compoſe the grove,*
" *And ſhoot, and ſpread, and bloſſom into love:*
" *The trembling palms their mutual vows repeat,*
" *And bending poplars bending poplars meet:*
" *The diſtant platanes ſeem to preſs more nigh,*
" *And to the ſighing alders alders ſigh.*"

EUSDEN.

The reader will determine how far this tranſlation deſerves the cenſure that it lies under, and whether the following paſſage that accompanies it is worthy of its author: " *As flowers, which are the loweſt of vege-*
" *tables, are the moſt gaudy, and do many times grow in great plenty at the bottom of ponds and ditches.*" Art of ſinking in Poetry, publiſhed by POPE.

*Vid. HASSELQUIST.

Atriplex hastata

ATRIPLEX HASTATA. SPEAR-LEAVED ORACH.

ATRIPLEX *Linnæi. Gen. Pl.* POLYGAMIA MONOECIA.

HERMAPHROD. *Cal.* 5-phyllus. *Cor.* 0. *Stam.* 5. *Stylus* 2-partitus. *Sem.* 1, depreſſum.

FEM. *Cal.* 2-phyllus. *Cor.* 0. *Stam.* 0. *Stylus* 2-partitus. *Sem.* 1, compreſſum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS.)

ATRIPLEX *haſtata* caule herbaceo, calycis valvulis femineis magnis deltoidibus ſinuatis. *Linnæi. Syſt. Vegetab. p.* 764. *Sp. pl.* 1494. *Fl. Suecic. n.* 921.

ATRIPLEX foliis triangularibus, baſi producta, valvulis triangularibus, ſubaſperis. *Haller hiſt. n.* 1617.

ATRIPLEX ſylveſtris folio haſtato ſeu deltoide. *Raii Syn. p.* 151, Wild Orache with a ſpear-pointed leaf.

Hudſon Fl. Angl. ed. 1. *p.* 337.

Lightfoot Fl. Scot. p. 636.

RADIX annua, ſimplex, fibroſa, albida.

CAULIS plerumque erectus, pedalis aut tripedalis, tetragonus, angulis obtuſis, lateribus ſubſulcatis, ad geniculos tumidiuſculus, lævis, purpuraſcens, ad baſin uſque, ramoſus; RAMI oppoſiti, inferiores longiſſimi, caulem ipſum interdum æquantes, utplurimum procumbentes.

FOLIA ima triangularia, margine plus minuſve dentata, farinâ ſubtus copioſe adſperſa, ſæpe vero penitus glabra, oppoſita, petiolata, ſuperiora ovato lanceolata, integerrima, alterna.

FLORES in ſummis caulibus et ramulis, in ſpicas anguſtas rubentes, digeſti.

Flos hermaphroditus ſterilis.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, marginibus membranaceis laceris, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA quinque, calyce paulo longiora: ANTHERÆ ſubrotundæ, didymæ, rubræ, *fig.* 3.

PISTILLUM: GERMEN in centro floſculi minimum ſterile.

Flos femineus.

CALYX: PERIANTHIUM diphyllum, foliolis ovato-acutis, erectis, granulis diaphanis obductis, *fig.* 2.

PISTILLUM: GERMEN ovatum, *fig.* 6: STYLI duo, etiam tres, filiformes, albi, *fig.* 4, 5.

PERICARPIUM nullum. *Calycis* valvæ magnæ, cordatæ, aſperæ, inter ſe includentes ſemen, *fig.* 7, 8.

SEMEN unicum, orbiculatum, compreſſum, *fig.* 9.

ROOT annual, ſimple, fibrous, and of a whitiſh colour.

STALK generally upright, from one to three feet in height, four cornered, the angles obtuſe, the ſides ſomewhat grooved, a little ſwelled at the joints, ſmooth, of a purpliſh colour, and branched quite to the bottom: the BRANCHES oppoſite; the lowermoſt very long, ſometimes almoſt equal with the ſtalk itſelf, and for the moſt part procumbent.

LEAVES on the lower part of the ſtalk triangular, with the edge more or leſs indented, ſprinkled plentifully on the under ſide with meal, ſometimes quite ſmooth, oppoſite, and ſtanding on foot-ſtalks; the upper leaves oval, pointed, intire, and alternate.

FLOWERS diſpoſed on the tops of the ſtalks and branches in narrow reddiſh ſpikes.

Hermaphrodite Flower ſterile.

CALYX: a PERIANTHIUM of five leaves, which are oval and concave, the edges membranous and jagged, *fig.* 1.

COROLLA wanting.

STAMINA: five FILAMENTS a little longer than the Calyx: ANTHERÆ roundiſh, double, and of a red colour, *fig.* 3.

PISTILLUM: a very minute barren GERMEN in the center of the floſcule.

Female Flower.

CALYX: a PERIANTHIUM of two leaves, which are oval, pointed, upright, and covered ov r with tranſparent grains or globules, *fig.* 2.

PISTILLUM: GERMEN oval, *fig.* 6. STYLES two, ſometimes three, filiform and white, *fig.* 4, 5.

SEED-VESSEL none. Valves of the *Calyx* large, heart-ſhaped, rough, including the ſeed, *fig.* 7, 8.

SEED ſingle, orbicular, and flattened, *fig.* 9.

BOTANISTS have happily divided the plants of this tribe into two Genera, each ſtrikingly diſtinguiſhable by the particular form of its ſeed-veſſells: without this diviſion, great indeed would be the difficulty of inveſtigating them.

The *Chenopodium* has hermaphrodite flowers only, which produce a ſeed contained within the calyx, compoſed of *five* leaves, which as the ſeed ripens, *does not inlarge itſelf.*

The *Atriplex* produces female bloſſoms, and male or hermaphrodite ones; the ſeed is contained within the calyx of the female bloſſom, which is compoſed of *two* leaves or valves, which *increaſe* as the ſeed becomes ripe; and in this ſtate only, is it obviouſly diſtinguiſhable from the *Chenopodium*; for at the time of its flowering, ſo ſmall are the female bloſſoms, as ſcarce to be diſtinguiſhed without a magnifying glaſs.

The plant here figured, is one of the moſt common of this genus, and one of the moſt variable in nature. Firſt it varies exceedingly according to its age, the perſon who had been accuſtomed to gather it in its young ſtate, would ſcarce recognize it when far advanced: ſecondly, it varies according to its ſituation; on dunghills it grows very ſtrong and luxuriant; by the road ſides, it is a much weaker plant, and its branches long and procumbent; in wet places, it is apt to become much more upright, the leaves ſometimes are very mealy on the under ſide, particularly when it grows on the ſea ſhore; at other times they are altogether ſmooth: in general, the broad triangular leaf readily diſtinguiſhes this ſpecies: but on dunghills, a variety ſometimes occurs with leaves not exactly correſponding to this figure, but approaching more to an oval, with an intire edge.

In its young ſtate, this plant is frequently gathered under the name of *Fat-hen*, *Lambs-quarters*, &c. and eaten in lieu of Spinach and other greens.

Birds, particularly that miſchievous one the ſparrow, are very fond of the ſeeds of the *Oracb's*. I have frequently had a plant of this Genus, ſtript of its ſeeds by them in a very ſhort time.

Cattle do not ſeem to be fond of it.

In the garden and cultivated ground, it is a very troubleſome annual.

The farmer, as we have before hinted, would do well to weed his dung-heap of this and the other ſpecies, which are equally noxious.

OSMUNDA SPICANT. ROUGH SPLEENWORT.

OSMUNDA *Linnæi Gen. Pl.* CRYPTOGAMIA FILICES.

Spica ramoſa: Fructific. globoſis.

Raii Syn. Gen. 4. HERBÆ CAPILLARES ET AFFINES.

OSMUNDA *Spicant* frondibus lanceolatis pinnatifidis: laciniis confluentibus integerrimis parallelis. *Linnæi Syſt. Vegetab. p.* 780. *Sp. Plant.* 1522. *Fl. Suecic. n.* 936.

STRUTHIOPTERIS, *Haller. hiſt. n.* 1687.

STRUTHIOPTERIS *Spicant. Scopoli Flor. Carniol. n.* 1258.

STRUTHIOPTERIS frondibus ſterilibus pinnatifidis, pinnulis denſis, oblongis falcatis; fructificantibus majoribus, laxius pinnatis, anguſtioribus. *Weis. Cryptog. p.* 287.

SPICANT Tragi et Germanorum.

LONCHITIS aſpera minor. *Bauhin Pin.* 359. *Parkinſon* 1042.

LONCHITIS aſpera. *Gerard emac.* 1140. *Raii Syn. p.* 118, Rough Spleenwort.

Oeder Fl. Dan. ic. 99.

Hudſon Fl. Angl. 382. *ed.* 2. *p.* 450.

Lightfoot Fl. Scot. p. 634.

FRONDES ſteriles plures ex una radice fibroſa, in orbem diſpoſitæ, ſemierectæ, aut reclinatæ, ſpithameæ, immo pedis longitudinem æquantes, *Polypodio vulgari* ſimiles, ſimplices nempe et pinnatifidæ, pinnis denſis, alternis, lanceolatis, oblongis, 2 lineas circiter latis, integerrimis, ſurſum curvis, mediis maximis, (uncialibus, ſeſquiuncialibus,) ſupernis et infernis brevioribus, nervoſis, margine cartilagineo, ſubcrenato, retrorſum flexo.

STIPES ſive nervus medius inferne fuſcis ſquamulis obſitus.

E medio centro harum frondium ſurgunt frondes fructificantes aliæ, etiam pinnatæ, at duplo illis longiores, graciliores, atro purpureæ, pinnis laxis alternis, lineam latis, mediis quoque longioribus, ſuperioribus et inferioribus ſenſim decreſcentibus, capſulis refertis.

CAPSULÆ denſe coagmentatæ, duas lineas diſtinctas, marginibus parallelas efformant, et ab initio coloris ſunt luteſcentis, ſenſim per maturitatem fuſci.

Fig. 1, Foliolum ſeu pinna cum capſulis auct.

Fig. 2, Capſula diſrupta, cum annulo.

LEAVES: ſeveral barren leaves proceed from one fibrous root, orbicularly diſpoſed, either half upright or reclining, from three inches to a foot in length, ſomewhat like the *common Polypody*, viz. ſimple and pinnatifid; the pinnæ ſet cloſely together, alternate, lanceolate, oblong, about two lines broad, perfectly entire, bent upwards; the middle ones largeſt, (even an inch or an inch and a half in length;) the upper and lower ones ſhorter, ribbed, the edge cartilaginous, very ſlightly notched, and bent backward.

STALK or midrib, beſet on its lower part with ſmall brown ſcales.

From the center of theſe leaves ariſe other leaves bearing the fructifications, which alſo are pinnated, but twice as long, and more ſlender, of a dark purple colour; the pinnæ looſely ſet, and alternate, a line in breadth, longeſt alſo in the middle, the upper and lower ones gradually decreaſing, filled with capſules.

CAPSULES cloſely crouded together, forming two diſtinct lines parallel with the edges of the leaf, at the beginning of a yellowiſh colour, becoming brown as they ripen.

Fig. 1, one of the ſmall leaves or pinnæ, with the capſules magnified.

Fig. 2, a capſule burſt open, with its ring.

BOTANISTS appear much divided as to the genus of this plant; ſome conſidering it as an *Oſmunda*, among whom is LINNÆUS; while others of great eminence contend for its being a *Struthiopteris*; of the latter opinion are HALLER, SCOPOLI, and WEIS.

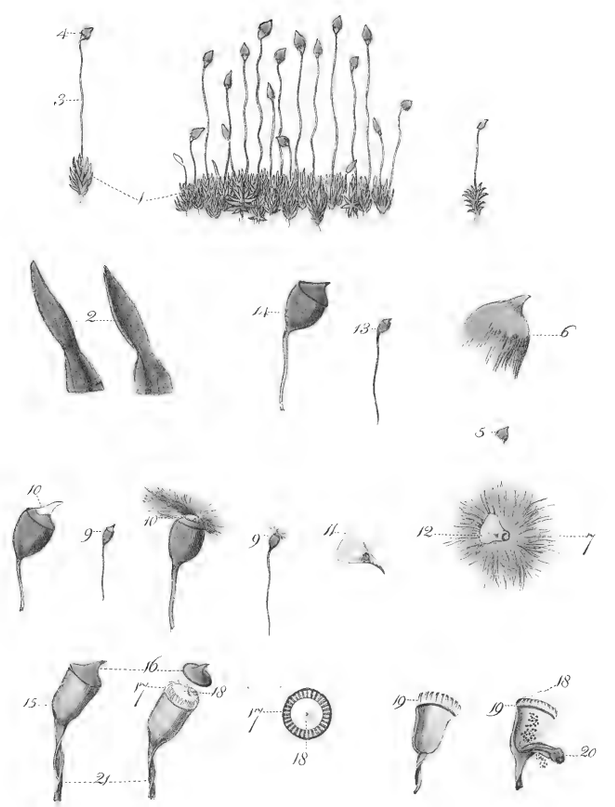
The diviſion of the *Ferns* into diſtant Genera, is perhaps as difficult a taſk as any in Botany. From the mechaniſm of the fructifications little is to be expected, as a great ſimilarity ſeems to pervade the whole. The various modes in which the capſules are placed on the plant, in ſome of them are ſtrikingly different, and appear to form very diſtinct and ſatisfactory characters; but when as a tribe, they come to be more minutely inveſtigated, the characters of one are frequently loſt in thoſe of another, and a preciſe generic character is in vain ſought for.

In the preſent doubtful caſe we have adopted the name of LINNÆUS.

The deſcription of this plant given by WEIS, in his *Plant. Cryptog.* is ſo very accurate, that deſpairing of a better, we have in the preſent caſe adopted it; not however meaning to eſtabliſh it as a precedent: from originality we ſhall never ſwerve in our figures, nor in our deſcriptions, but as ſeldom as poſſible; taking care that whenever we do, it ſhall not be to the prejudice, but rather advantage of the work.

The *Oſmunda Spicant* grows plentifully in the environs of *Caen Wood*, near *Hampſtead-Heath*, the ſeat of Lord Mansfield; and produces its fructifications in July, Auguſt, and September.

Osmunda Spicant



Polytrichum subrotundum

Swainson Sculpt

POLYTRICHUM SUBROTUNDUM. DWARF POLYTRICHUM.

POLYTRICHUM *Linnæi.* CRYPTOGAMIA MUSCI.

Calyptra duplex, interior membranacea, lævis, exterior floccida.

Raii Syn. Gen. 3. MUSCI.

POLYTRICHUM *ſubrotundum* caule ſimplici antherâ ſubrotunda. *Hudſon Fl. Angl. p.* 400.

MNIUM *Polytrichoides* calyptra villoſa. *Lin. Syſt. Vegetab. p.* 796. *Sp. Pl. p.* 1576. *Fl. Suecic. p.* 385.

MNIUM calyptra villoſa, acaulon, foliis ſerratis, capſulis cylindricis erectis. *Haller. hiſt. n.* 1837.

POLYTRICHUM *Aloefolium. Scopoli Fl. Carniol. p.* 309. *n.* 1290.

POLYTRICHUM nanum, capſulis ſubrotundis galeritis, aloës folio non ſerrato. The dwarf round-headed Aloe-leaved Polytrichum, *Dillen. Muſc.* 428. *t.* 55. *f.* 6.

POLYTRICHUM *nanum* capſula cylindrica erecta; ſurculis ſimplicibus, breviſſimis, foliis ſerrulatis. *Weis Plant. Cryptogam. p.* 173.

MUSCUS capillaceus minor, calyptra tomentoſa. *Vaill. paris.* 131. *t.* 26. *f.* 15.

ADIANTUM aureum medium, in ericetis proveniens. *Vaill. paris.* 429. *t.* 55. *f.* 7.

MUSCUS coronatus rigidus minor et humilior capitulis villoſis brevioribus. *Moris. hiſt. 3. p.* 630. *t.* 7. *f.* 7.

POLYTRICHUM minus capſulis ſubrotundis, calyptra quaſi lacera coronatis. *C. G.* 221. *Raii Syn. p.* 91.

RADIX tomentoſa.
CAULIS breviſſimus, vix ullus.
FOLIA brevia, rigida, intus concava, extus convexa, acuta, margine minutiſſime ſerratâ, baſi lato membranaceo caulem amplectente, ſiccata incurvata teretiuſcula, *fig.* 1.

PEDUNCULI ſimplices, unciales, rubicundi, ſubdiaphani, flexuoſi, *fig.* 3, demum tortuoſi, *fig.* 21.

CAPSULÆ ſubrotundæ, *fig.* 4.
Fig. —— 2, Folia per lentem viſa.
5, Calyptra exterior magn. nat.
6, Eadem magn. auct.
7, Eadem inverſa ut Calyptra interior appareat.
9, 9, Calyptra interior in ſitu naturali.
10, 10, Eadem aucta.
11, Calyptra interior ſeparata ab exteriore et ſeorſim exhibita.
12, Eadem in ſitu naturali cum exteriore connexa.
13, Capſula magn. nat. nuda.
14, Eadem auct.
15, Eadem ad maturitatem magis accedens.
16, Operculum.
17, 17, Ciliæ.
18, 18, 18, Membrana mucronata in ſummo capſulæ cui adnectuntur ciliæ.
19, 19, Ciliæ in ſectione longitudinali Capſulæ exhibitæ.
20, Receptaculum ſeminis.

ROOT woolly.
STALK very ſhort, ſcarce any.
LEAVES ſhort, rigid, hollow within, round without, ſharply pointed, the edge very finely ſerrated, embracing the ſtalk by a broad membranous baſe; when dried bending inwards, and of a roundiſh form, *fig.* 1.
FOOT-STALKS ſimple, an inch high, reddiſh, ſomewhat tranſparent, crooked, *fig.* 3, finally twiſted, *fig.* 21.
CAPSULES roundiſh, *fig.* 4.
Fig. —— 2, The leaves viewed through a magnifier.
5, The exterior Calyptra of its natural ſize.
6, The ſame magnified.
7, The ſame inverted, that the inner Calyptra may appear.
9, 9, The inner Calyptra in its nat. ſituation.
10, 10, The ſame enlarged.
11, The inner Calyptra ſeparated from the outer one, and ſhewn by itſelf.
12, The ſame in its natural ſituation, connected with the outer one.
13, The Capſule of its nat. ſize uncovered.
14, The ſame enlarged.
15, The ſame approaching more to maturity
16, The Cover.
17, 17, The Ciliæ.
18, 18, 18, A pointed Membrane at the ſummit of the Capſule, to which the Ciliæ are connected.
19, 19, The Ciliæ ſhewn in a longitudinal ſection of the Capſule.
20, The Receptacle to which the ſeeds are connected.

ABOUT two years ago, (1776) on examining the ſtructure of the *Polytrichum commune*, in a very young ſtate, I found one of the heads, *(Antheræ Linn.)* after I had diveſted it of its woolly Calyptra, covered with a membranous ſhining ſubſtance, and which I had no ſooner ſeen, than I judged it to be a Calyptra, being ſo very ſimilar to the Calyptra's of ſome Moſſes I had juſt before been examining; and on a more minute inveſtigation, I found it to be a real Calyptra, not accidental to the plant then under examination, but occurring in all thoſe which I, at that time, had an opportunity of diſſecting; and afterwards found to be in the dwarf variety of the ſame ſpecies, growing on heaths, and in the preſent plant.

Thoſe who ſhall take the pains of inveſtigating the ſtructure of theſe Moſſes, will think it ſtrange that a part ſo very obvious to the naked eye, ſhould not have been noticed before; but this is eaſily accounted for.

No one, when he ſits down to examine theſe Moſſes, conceives a priori, that they have any more than one Calyptra; finding that which is peculiar to this Genus, he reſts ſatisfied, pulls it off, and proceeds to the examination of the remaining parts, not imagining that a membranous Calyptra is cloſely connected by its apex to the woolly one, pulled off with, and covered by it, and ſcarce diſcovered but by totally inverting it: but that this is actually the caſe, any one may ſatisfy themſelves in the courſe of this and the ſucceeding months, *February* and *March*.

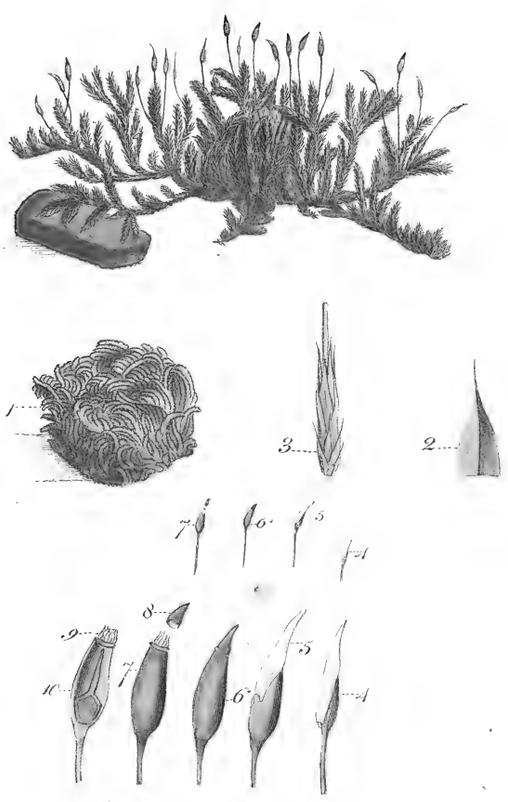
This inner Calyptra differs very little from the Calyptra of other Moſſes; at firſt it wholly ſurrounds the unripe Capſules, as they increaſe in ſize it ſplits at bottom, and finally becomes very ſhort.

I was the more pleaſed with this diſcovery, as I conceived hopes it would place the genus *Polytrichum* in a more pleaſing and ſatisfactory point of view; and I have accordingly ventured to alter its generic character as above: by this alteration it is brought from the *Mniums*, among which it is placed by LINNÆUS and HALLER, and arranged with the *Polytrichums* of DILLENIUS, HUDSON, SCOPOLI, and WEIS, to which its habit alone certainly entitles it, was it not found to accord with the *Polytrichum* in the eſſential character now diſcovered.

Why nature ſhould have been thus careful in covering this genus of plants with a warm additional coat, while many of the other Moſſes, at the ſame time of the year, are thinly clad with a ſingle membranous veil, does not appear. In the ſtructure of the two Calyptra's, there is a moſt eſſential difference; the outer one being a woolly ſubſtance cloſely matted together, without any connecting membranous ſubſtance; the inner one conſiſting wholly of membrane.

The plant here figured, is the *Polytrichum capſulis ſubrotundis* of DILLENIUS, and of which that, with the *capitulis oblongis*, ſeems to be only a variety growing in warmer and leſs expoſed ſituations.

It is by no means an uncommon Moſs on our heaths, and expoſed hilly and ſandy places about town. It throws out its ſtalks in *November* and *December*, and ripens its Capſules in *January* and *February*.



Hypnum sericeum

HYPNUM SERICEUM. SILKY HYPNUM.

HYPNUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Anthera operculata. *Calyptra* levis. *Filamentum* laterale ortum e perichætio.

Raii Syn. Gen. 3. MUSCI.

HYPNUM *ſericeum* ſurculo repente, ramis confertis erectis, foliis ſubulatis, antheris erectis. *Lin. Syſt. Vegetab. p.* 801. *Sp. Pl. p.* 1595. *Fl. Suecic. n.* 1036.

HYPNUM *ſericeum. Scopoli. Fl. Carniol. p.* 340.

HYPNUM ramis teretibus; foliis pilo præpilatis; capſulis cylindricis, erectis, ariſtatis. *Haller. hiſt. n.* 1750.

HYPNUM vulgare ſericeum recurvum, capſulis erectis cuſpidatis. *Dillen. Muſc.* 323. *t.* 42. *f.* 59.

MUSCUS terreſtris luteo-viridans ſericeus repens. *Moris. hiſt.* 3. *p.* 626. *ſ.* 15. *t.* 5. *fig.* 25.

MUSCUS arboreus ſplendens ſericeus. *Vaill. Paris.* 132. *t.* 27. *fig.* 3.

HYPNUM repens trichoides terreſtre luteo virens vulgare majus, capitulis erectis. *Raii Syn. p.* 84.

Hudſon. Fl. Angl. ed. 1. *p.* 428.

Lightfoot. Fl. Scot. v. 2. *p.* 762.

CAULES ſive viticuli longi, repentes, fibrillis copioſis, tomentoſis adhærentes, valde ramoſi, in denſos cæſpites congeſti, ramis creberrimis, ſurrectis, brevibus, ſubteretibus, in ſiccitate incurvis, *fig.* 1, tactu rigidis, in humiditate rectis mollibus.

STALKS, or ſhoots, long, creeping, adhering by numerous ſmall, woolly fibres, very much branched, and forming cloſe tufts; branches numerous, upright, ſhort, and roundiſh; when dry, bending down at top, and ſomewhat ſtiff, *fig.* 1; when moiſt, upright and ſoft.

FOLIA ovato-lanceolata, *fig.* 2, in pilum longum terminata, denſiſſime imbricata; in ſiccitate appreſſa, capillaria; humida latiora, patula, ex obſcuro viridia, cum ſericeo ſplendore ad luteum vergente.

LEAVES oval and pointed, *fig.* 2, terminating in a long hair, lying cloſely one over the other, when dry preſſed together, and very fine; when moiſt broader, and more ſpreading, of a dulliſh green, inclining to yellow, with a ſhining ſilky appearance.

PEDUNCULI ſemunciales, unciales, purpureæ, perichætio ſquamoſo cinctæ, *fig.* 3, confertæ, circa medium ſurculi ortæ.

FOOT-STALKS an inch and a half or an inch long, purple, at bottom covered with a ſcaly perichætium, *fig.* 3, ariſing from about the middle of the ſhoots.

CAPSULÆ oblongæ, teretes, erectæ, inferne paululum incraſſatæ, ex livido fuſcæ, *fig.* 6, 7, per medium diſciſſa, *fig.* 10.

CAPSULES oblong, round, upright, ſomewhat enlarged at bottom, of a livid brown colour, *fig.* 6, 7; cut down the middle at *fig.* 10.

CALYPTRA pallida.

CALYPTRA pale brown.

OPERCULUM breve, roſtratum, miniatum, *fig.* 8.

OPERCULUM ſhort, ending in a beak of a bright red colour, *fig.* 8.

CILIÆ albidæ, erectæ, una tantum ſeries, *fig.* 9.

CILIÆ or hairs whitiſh, upright, and one row only, *fig.* 9.

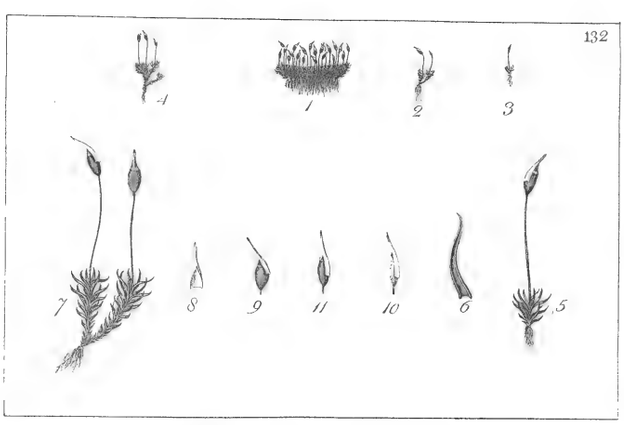
THE *Hypnum ſericeum* is one of our moſt common, as well as one of our earlieſt *Moſſes*, producing its Capſules from September to February.

It generally puts forth its fructifications in the greateſt plenty, on the tops of old walls. It creeps alſo on the ground, as well as on the trunks of trees.

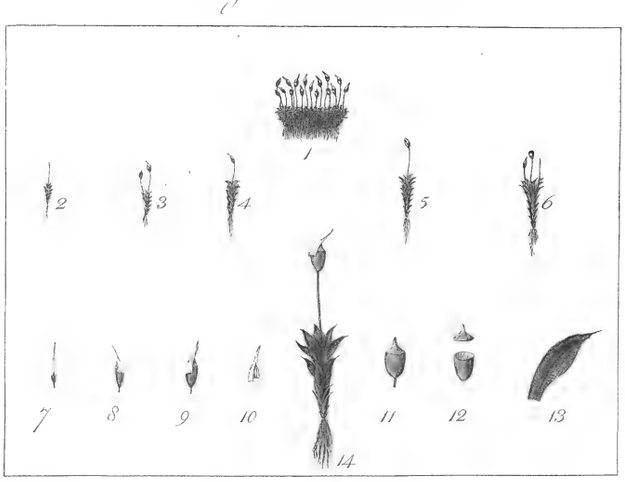
None of our *Moſſes* afford a more beautiful carpet: it frequently exhibits all the richneſs and ſoftneſs of ſilk, particularly when dry. But thoſe patches of it, which put on this yellow and ſhining appearance, by which it is ſo readily diſtinguiſhed, do not always produce fructifications in the greateſt abundance.

It may be diſtinguiſhed from the *Hypnum rutabulum*, which often occurs with it, by having longer and more upright Capſules.

DILLENIUS has deſcribed this *Moſs* with his uſual accuracy, which is modernized, and ſomewhat improved by WEIS, from whom our deſcription is almoſt literally taken.



Bryum viridulum



Bryum truncatulum

BRYUM TRUNCATULUM. BROWN BRYUM.

BRYUM *Linnæi Gen. Pl.* CRYPTOGAMIA MUSCI.

Raii Syn. Gen. 3. MUSCI.

BRYUM *truncatulum* antheris erectis ſubrotundis, operculo mucronato. *Lin. Syſt. Vegetab. p.* 798. *Sp. Pl.* 1584. *Fl. Suecic.* 391. *Dillen. Muſc.* 347. *t.* 45. *fig.* 7. *Raii Syn.* 94. *Hudſon Fl. Angl.* 408. *ed.* 2. *p.* 477. *Lightfoot. Fl. Scot. p.* 730.

CAULES ſimplices, breviſſimi, lineas tres raro ſuperantes, cæſpitoſi, *fig.* 1, 6.

FOLIA ovato-lanceolata, mucronata, *fig.* 13, ſplendentia, carinata, ſuperiora majora, in ſtellulam expanſa.

PEDUNCULI ſimplices, ſubinde bini, trium quatuorve linearum, purpuraſcentes.

CALYPTRA pallida, obliqua, acuminata, *fig.* 7, 8, 9, 10.

OPERCULUM primo roſtratum, obliquum, delapſâ calyptrâ contrahitur erectumque evadit, *fig.* 11, 12.

CAPSULA primo ovata, *fig.* 8, 9, flaveſcens, demum rufa, truncata, annulo ciliiſque deſtituta, *fig.* 11, 12.

Plantula microſcop. auct. *fig.* 14.

STALKS ſimple, very ſhort, ſeldom exceeding three lines, growing in tufts, *fig.* 1, 6.

LEAVES oval, lanceolate, terminating in a point, *fig.* 13, ſhining, with a projecting midrib; thoſe on the top of the ſtalk largeſt, with a ſtar-like expanſion.

PEDUNCLES ſimple, ſometimes growing two together, three or four lines in length, of a purpliſh colour.

CALYPTRA pale, oblique, and terminating in a long point, *fig.* 7, 8, 9, 10.

OPERCULUM, at firſt having a beak, placed obliquely on the capſule, on the falling off of the calyptra becoming ſhorter and upright, *fig.* 11, 12.

CAPSULE, at firſt oval, *fig.* 8, 9, of a yellowiſh colour, finally of a reddiſh brown, as it were cut off at top, and deſtitute of both ring and ciliæ, *fig.* 11, 12.

The whole plant magnified, *fig.* 14.

THE *Bryum truncatulum* is one of the leaſt of our *Moſſes*, and diſtinguiſhable at firſt ſight by the great number of its little brown heads, which, when the operculum falls off, have their margin entire, ſo that they appear as if cut acroſs, whence its name of *truncatulum*.

It is very common almoſt every where on banks, producing its fructifications from September to February.

It varies much in ſize.

HASSELQUIST, in his journey to *Paleſtine*, finding the *Walls* of *Jeruſalem* covered with this little plant, calls it *Hyſſopus Solomonis*, from a ſuppoſition that it was the plant which *Solomon* meant, when he ſpake of trees from the Cedar in Lebanon to the Hyſſop which ſpringeth out of the wall.

BRYUM VIRIDULUM. GREEN BRYUM.

BRYUM *viridulum* antheris erectis ovatis, foliis lanceolatis acuminatis imbricato-patulis. *Linnæi Syſt. Vegetab. p.* 798. *Sp. Pl.* 1584. *Fl. Suecic.* 1002. *Dillen. Muſc.* 380. *t.* 48. *fig.* 43. *Raii. Syn.* 97. *Hudſon. Fl. Angl.* 408. *ed.* 2. 487. *Lightfoot. Fl. Scot.* 731.

EXPL. FIG.

Fig. 1, 2, 3, 4, Plantæ nat. magnitud.

Fig. —— 5, 7, Plantæ auct.

Fig. —— 6, Folium auct.

Fig. 9, 10, 11, Capſulæ cum Calyptrâ.

Fig. —— 8, Calyptra ſeorſim exhibita.

EXPLAN. of FIG.

Fig. 1, 2, 3, 4, Plants of their natural ſize.

Fig. —— 5, 7, Plants magnified.

Fig. —— 6, a Leaf magified.

Fig. 9, 10, 11, Capſules with the Calyptra.

Fig. —— 8, The Calyptra exhibited ſeparately.

THIS ſpecies differs from the above in many particulars. It grows in cloſe ſoft tufts, which are in general larger, and of a more yellow hue; the ſtalks are frequently branched; the leaves are much finer, being nearly capillary; the mouth of the capſule, when the operculum falls off, is narrower than the middle, hence it bears a greater reſemblance to an egg, with the extremity cut off; while the *truncatulum* approaches more to the form of an urn. In the *viridulum*, the mouth is alſo very finely ciliated.

The *viridulum* grows in great abundance on the banks ſurrounding *Charlton Wood*; and produces its fructifications with the *truncatulum*.

Sansom Sculp.

Agaricus ovalus

AGARICUS OVATUS. PUCKER'D MUSHROOM.

AGARICUS *Linnæi Gen. Pl.* CRYPTOGAMIA FUNGI.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *ovatus* pileo ovato ſubplicato, ſtipite nudo ad baſin attenuato ſcabriuſculo; lamellis creberrimis ſubcoaleſcentibus.

AMANITA pileo ovato ſtriato, cinereo, annulato, fugaci. *Haller hiſt. helv. n.* 2479.

AGARICUS *ovatus. Scopoli Fl. Carniol. n.* 1579. Diagn. *Albus, ceſpitoſus; vertice rufeſcente; ſtipite cylindrico et annulo fugaci cincto.*

AGARICUS; volva exceptus, pileo campanulato, ſtriato, vertice lævi, petiolo annulato, cylindraceo, fiſtuloſo, in baſin roſtratum definente. *Gleditch, Method. Fungor. p.* 89.

FUNGUS, qui volvam vix egreſſus in atramentum reſolvitur, pileolo campanulato, plumbeo, vertice lævi, reliqua parte ſtriato, pediculo cylindrico, albo, fiſtuloſo, radice roſtrata. *Michel. N. Pl. G.* 189. *t.* 80. *f.* 5.

FUNGUS multiplex ovatus cinereus. *Vaill. p.* 73. *t.* 12. *fig.* 10, 11.

FUNGUS ſuperficiei murini coloris, lamellis albicantibus. *Raii Syn. p.* 5. 21.

AGARICUS *plicatus*, ſtipitatus, pileo ovato ſtriato plicato cinereo, vertice lævi, ſtipite annulato fiſtuloſo, baſi ſubulato. Pucker'd Agaric, *Lightfoot Flora Scotica. p.* 1023. *Schæffer. icon. tab.* 17, 67, 68.

STIPES: Stipites plures e terrâ aut ligno ſemiputrido aggregatim aſſurgentes, inferne extra pileum *ſcabriuſculi*; ad baſin attenuati, fuſci, ſuperne intra pileum albiſſimi, ſubfulcati, ad apicem ſenſim attenuati, in adultis ſtipes ſemipedalis, ſubcylindricus, lævis, craſſitie minimi digiti aut major evadit, modice firmus et carnoſus, fiſtuloſus, nudus; tranſverſim ſectus circulos in carne exhibens.

VOLVA nulla.

PILEUS *primum* ovatus aut obtuſe conicus, circa orem contractus, et ſubplicatus, ſolidus, ponderoſus, pallide fuſcus; in *adultis* ſubcampanulatus, latitudine ad tres uncias accedens, murinus, maculis umbrinis aut ferrugineis præcipue ad verticem notatus, vertex ſaturatius colorata, lævis, ſubinde vero ſubſquamoſa; latera plus minuſve ſulcata, *demum* fere planus, margine revoluto.

LAMELLÆ *creberrimæ*, *compactæ*, latæ, *filamentis tranſverſis nudo oculo inconſpicuis connexæ*, unde, ita coaleſcunt (preſertim in junioribus) ut lamellam integram vix ſeparare queas, primum albæ, mox pars inferior dimidia nigreſcit, et tandem totæ lamellæ in liquamen atramentoſum reſolvuntur; ſuperficies interna pilei in junioribus farinâ ſubtiliſſimâ canâ adſperſa.

STALKS, generally ſpringing from the earth, or decayed wood, in cluſters; the lower part, without the cap, roughiſh, of a brown colour, and tapering to the baſe; the upper part, within the cap, very white, ſlightly grooved, and tapering gradually to the top; when full grown, it becomes ſix inches high, nearly cylindrical, ſmooth, and the thickneſs of the little finger, or larger, moderately firm and fleſhy, hollow and naked, and cut through the middle ſhews circles in the fleſhy part.

RING wanting.

CAP *firſt* oval or obtuſely conical, the mouth contracted, and puckered around the ſtalk, ſolid, heavy, and of a light brown colour; *in the full grown ones*, ſomewhat bell-ſhaped, about three inches in breadth, of a mouſe colour, marked with umber coloured or ferruginous ſpots, particularly at the top; the top of a deeper colour, ſmooth, but ſometimes ſlightly chopped; the ſides more or leſs deeply grooved, becoming *finally* almoſt flat, the edge curling up.

GILLS *very numerous*, compact, and broad, *connected together by tranſverſe filaments, inconſpicuous to the naked eye*, whence they ſo coaleſce, that it is difficult to ſeparate a ſingle gill entirely; at firſt white, quickly the lower half becomes of a blackiſh colour, and laſtly the whole of the gills diſſolves into a black inky liquid: the internal ſurface of the cap, in the young ones, is ſprinkled over with a very fine grey powder.

IT appears to be a matter of much doubt, whether this *Fungus*, common as it appears to be in moſt parts of Europe, be deſcribed by LINNÆUS. Certainly there are none of his *Agarici*, which accord exactly with ours: neither do HALLER, or SCOPOLI, quote LINNÆUS in their deſcriptions of it. SCHÆFFER, who appears to be too fond of multiplying plates, has given it in no leſs than three. It is true, by this means, the plant is repreſented in its various ſtates; but, perhaps, theſe might have been ſatisfactorily exhibited in a ſingle one.—If plants are thus to be delineated in all their varieties, natural hiſtory muſt ſink under its own weight.

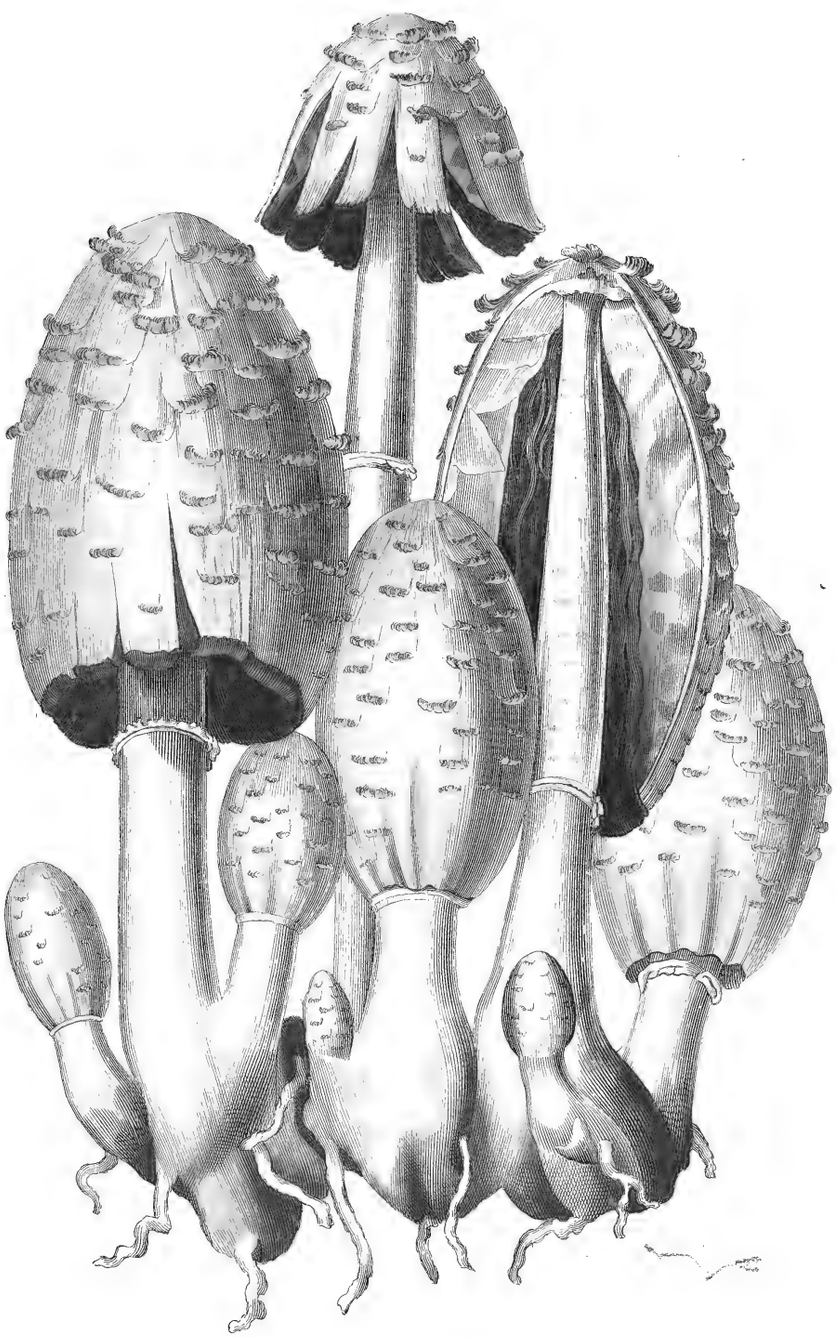
I ſuſpect this ſpecies to be the *Fungus ſuperficie murini coloris lamellis albicantibus* of RAY, *p.* 5. *n.* 21. but cannot fix it with certainty. SCOPOLI has given it the name of *ovatus*, which I have retained, with Mr. LIGHTFOOT's Engliſh name, who has very accurately deſcribed it. I agree with him entirely in conſidering it as a ſpecies diſtinct from the *fimetarius*, and with which, in my opinion, it has but little real affinity. The deſcription and figure here given, when contraſted, will make it unneceſſary to particularize the peculiarties which diſtinguiſh each. But there is a ſingularity of ſtructure, occuring in the *ovatus*, which ſeems worthy of remark. The Gills are connected together by numerous tranſverſe bars or filaments, diſcoverable only when greatly magnified: the uſe of theſe appears to be to keep the Gills at an equal diſtance from each other, and thereby prevent the fructifications which are ſituated on the flat ſurface of the lamellæ, from being preſſed on, and deſtroyed, by their very great cloſeneſs. I have not hitherto obſerved this peculiarity of ſtructure in any other *Fungus:* in the *fimetarius* it certainly does not exiſt. Theſe connecting filaments in the *ovatus*, make it exceeding difficult to ſeparate one of the lamellæ entire.

Theſe Fungi are very common with us in the borders of wet meadows, near the roots of willow trees, in gardens alſo, near houſes, and by the ſides of roads. They are found in the greateſt plenty, from the beginning of September to the end of October. I have alſo found the ſame ſpecies in July. From the time of their ſpringing up, to the time of their beginning to decay, is about five days. Their manner of decaying is ſimilar to that of the *fimetarius*, and ſeveral others; the gills diſſolving into a very black liquor, like ink, which dropping, carries with it the ſeed of the Muſhroom, which is obſervable in the liquor if greatly magnified.

It varies in ſize, and alſo in colour, chiefly from a lighter to a paler brown.

The Gills are often found full of little maggots.

There is no reaſon to ſuſpect its being poiſonous, nor yet can it be recommended as eatable.



Agaricus fimetarius

AGARICUS FIMETARIUS EGG MUSHROOM.

AGARICUS *Linnæi Gen. Pl.* CRYPTOGAMIA FUNGI.
FUNGUS horizontalis ſubtus lamelloſus.
Raii Syn. Gen. 1. FUNGI.

AGARICUS *fimetarius* ſtipitatus, pileo campanulato lacero, lamellis nigris lateraliter flexuoſis, ſtipite fiſtuloſo.
Lin. Syſt. Vegetab. p. 820. *Spec. Pl. p.* 1643. *Fl. Suecic. n.* 1215.

AMANITA albus, campanulatus, ſquamoſus, nigreſcens. *Haller. hiſt. helv. p.* 157. *n.* * 2357.

AGARICUS *fimetarius*. *Scopoli Fl. Carniol. n.* 1484.

AGARICUS pileo campanulato, contracto, ſtriato et villoſo, lamellis tenuiſſimis; petiolo cylindraceo, annulo fugaci, diſtincto, vel nullo. GLEDITCH. *Fung.* p. 122.

FUNGUS albus ovum referens. *Buxbaum. Cent.* 4. *t.* 27. *fig.* 1. *Raii Syn. p.* 5. *n.* 22. *Hudſon. Fl. Angl. p.* 493. *Lightfoot. Fl. Scot. p.* 1021. *Schæffer tab.* 7. 8. 46. 47. 100.

Gregatim plerumque naſcuntur hi Fungi, ſubinde vero ſolitarii inveniuntur.

STIPES primùm pileo penitus obtegitur, mox ſemipedalis, evadit, cylindricus, fiſtuloſus, albiſſimus, *medullâ filiformi, intra tubum liberâ.*

VOLVA nulla, ſed margo inſtar volvæ ex margine pilei lacero ſtipitem cingente infra laminas.

PILEUS albus, in junioribus *oblongus* digitalis, mox ſubcampanulatus, demum fere planus; CARO tenuis, CUTIS *in ſquamas fuſcas laciniatas ſurſum revolutas ſeparans*, quæ cœlo intempeſtivo pluviis ſæpe abluuntur, pileo decorticato albo relicto.

LAMELLÆ numeroſæ, lineas tres latæ, primum albiſſimæ, farinâ quaſi adſperſæ, in adultis laxæ, *flexuoſæ* cum ruboris tincturâ, demum nigricantes, in liquorem atramentoſum diffluentes.

Theſe Muſhrooms moſt commonly riſe out of the ground in cluſters, ſometimes they grow ſingly.

STALK at firſt is wholly covered by the Pileus or Cap, but ſoon grows to the height of ſix inches, is cylindrical, hollow and very white, *the pith within the tube is ſhaped like a thread and looſe.*

RING proper, none, but a ſlight edging like a ring from the torn edge of the cap ſurrounds the ſtalk below the gills.

CAP white, in the young ones *oblong*, the length of the finger, preſently becoming ſomewhat bell-ſhaped, finally almoſt flat; the FLESH thin; the SKIN *ſeparating into brown flakes which curl upwards*, and which in ſhowery weather are often waſhed off by the rains, leaving the Cap naked and white.

GILLS numerous, three lines broad, at firſt exceeding white and covered as it were with powder, when full grown they are looſely connected and *waved*, with a tinge of red, finally they become black and diſſolve into an inky liquor.

The FUNGI, generally known in Engliſh by the names of *Muſhrooms* and *Toad-ſtools*, are a tribe of plants, which, while they have afforded abundant matter of curious inquiry to the philoſophic naturaliſt, have hitherto eluded the moſt unwearied attempts of the Botaniſt to reduce them to their ſeveral ſpecies and varieties.

Although, in point of Utility to mankind, they may not compare with many other families of plants, yet are they by no means without their importance in the general œconomy of nature. Whatever is not immediately applicable to our own wants, we are apt to think too lightly of; forgetting, that the infinitely more numerous Inhabitants of this terraqueous Globe, are equally the objects of the care of an all bountiful Creator.

A great variety of Inſects feed on the different ſpecies of Fungi, particularly the *larvæ* or *maggots*, of many of the Fly kind, *Muſcæ Linn.*

In ſome Countries, Muſhrooms are made much more an object of food than with us; this prompts the inhabitants often to eat ſuch as are in their natures poiſonous, whence direful effects have too often proceeded. With us they are uſed more as an article of luxury, and the markets being chiefly ſupplied by the cultivators of them, who propagate one particular ſpecies, theſe fatal accidents ſcarce ever happen here.

To prevent, however, any accidents of this kind, perhaps the beſt advice would be to caution perſons in general, to meddle with no other ſort than the common field Muſhroom, which is generally cultivated; and rather to procure ſuch of thoſe who cultivate them, than of thoſe who may occaſionally offer them to ſale: and to render a knowledge of this ſpecies more obvious, we propoſe, in a future number, to give a figure of it in all its ſtates, and ſhall endeavour to diſtinguiſh it from the others in the plaineſt manner.

From the obſervations already made on this Genus, we are led to think, that the ſeveral ſpecies of them are more diſtinct, and leſs liable to thoſe amazing alterations, which Botaniſts inform us of, and which indeed, are ſufficient to intimidate the Student, and deter him, from entering on a field, where he is to expect nothing but confuſion, and be loſt in the perplexing mazes of endleſs varieties. There is one pleaſing circumſtance attends the *Fungi:* they make their principal appearance in Autumn, at a time of the year, when the Botaniſt is moſt at leiſure to obſerve them, and when ſcarce any other plants engage his attention. Next ſucceed the wintry Moſſes: and thus the Botaniſts perpetual ſummer is rendered compleat.

The ſpecies here figured is not eaten with us; yet there appears no reaſon to ſuſpect its being in any degree poiſonous.

It occurs very frequently, towards the end of September, by the ſides of Roads, growing out of the ground, probaly where there has been ſome dung intermixed.

It is diſtinguiſhed from the other *Fungi* by its oblong oval ſhape; and in a more particular manner, *by the raggedneſs of its outer coat, which curls up in flakes*; but it is apt to be waſhed off in heavy rains. The gills are large, numerous. and *waved*, at firſt of a reddiſh purple colour, and often white, finally diſolving into a black liquid, like many others of the ſame kind.